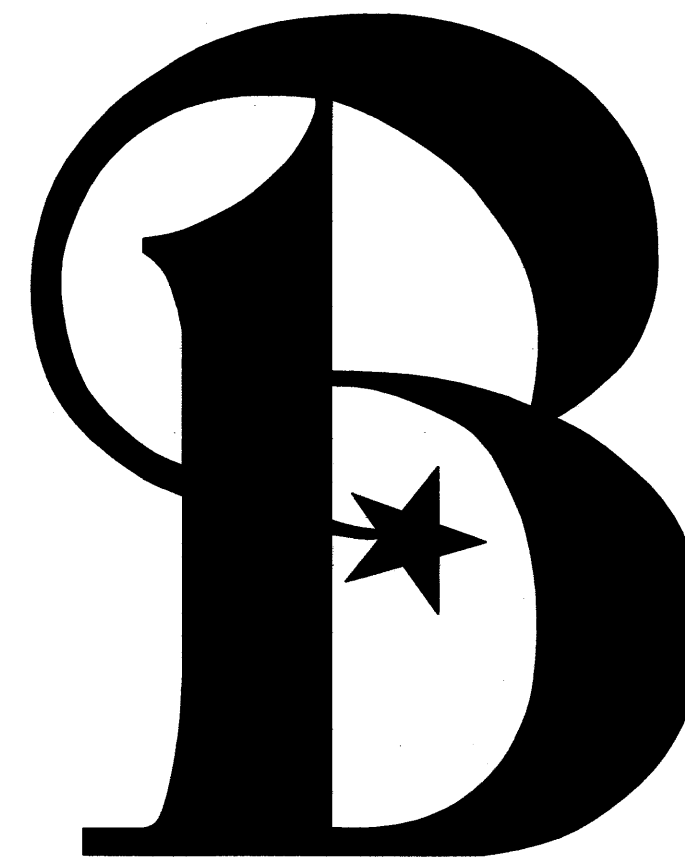


CITY OF BRYAN JOB# 332/611-DE-0404 - KENT STREET EXTENSION

CONSTRUCTION PLANS
FOR
CITY OF BRYAN
P.O. BOX 1000 BRYAN, TEXAS 77805
KENT STREET EXTENSION
CITY OF BRYAN JOB # 332/611-DE-0404
NOVEMBER, 2005

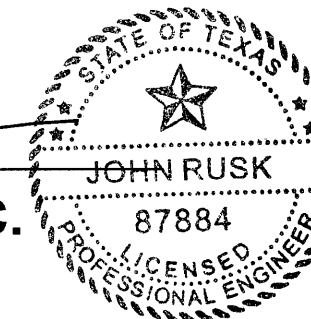
DRAWING INDEX	
NO	TITLE
-	COVER SHEET
C1.0	GENERAL NOTES & PROJECT INFORMATION
C1.1	EXISTING CONDITIONS & DEMOLITION PLAN
C1.2	STREET/STORM SEWER PLAN & PROFILE
C1.3	SIDEWALK
C1.4	WATERLINE PLAN/PROFILE
C1.5	PAVING AND DRAINAGE DETAILS
C1.6	PAVING AND DRAINAGE DETAILS
C1.7	PAVING AND DRAINAGE DETAILS
C1.8	WATERLINE DETAILS



CITY OF BRYAN
The Good Life, Texas Style.

Submitted: John Rusk
Goodwin-Lasiter, Inc.

Date: 1-11-2006



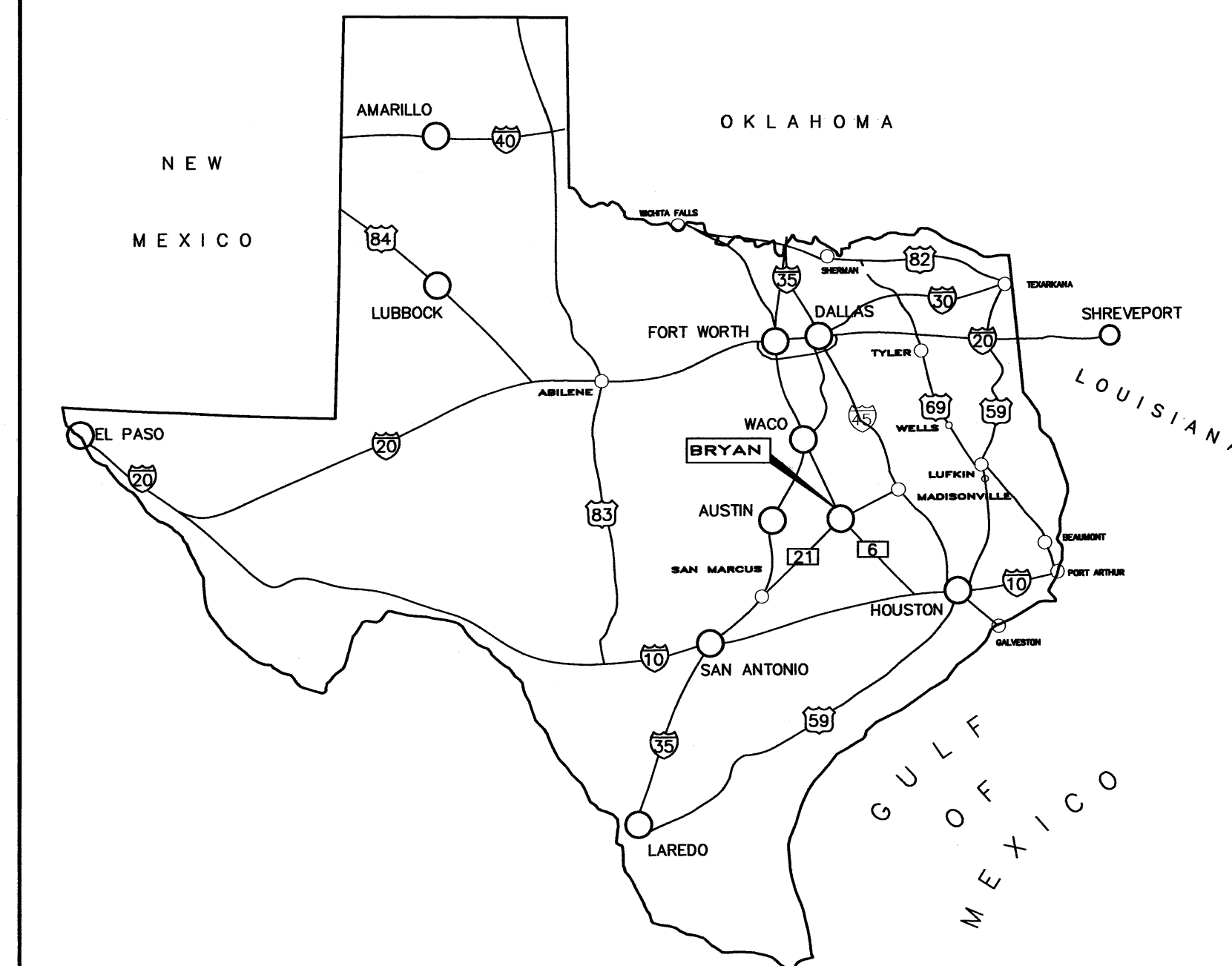
MAYOR & CITY COUNCIL

Ernie Wentrcek.....Mayor
Joe Marin.....City Council
Paul Madison.....City Council
Mark Conlee.....City Council
Ben Hardeman.....City Council
Russell Bradley.....City Council
Jason Bienski.....City Council

CITY ADMINISTRATION & STAFF

Mary Kaye Moore.....City Manager
Linda Grubbs Huff, P.E.....City Engineer
Richard Reynosa, E.I.T.....Project Manager

PROJECT LOCATION MAP



PREPARED BY:

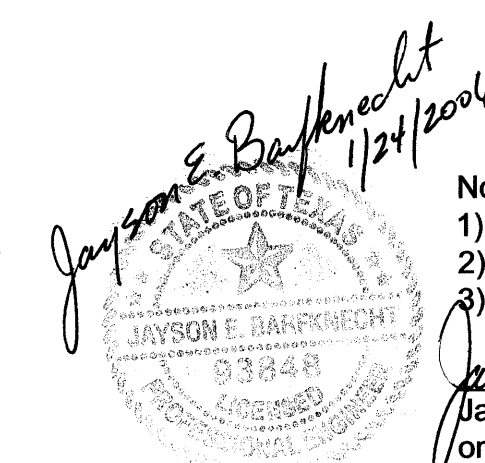


GOODWIN-LASITER, INC.

ENGINEERS • ARCHITECTS
SURVEYORS

1509 EMERALD PKWY, SUITE 101 • COLLEGE STATION, TEXAS 77845 • (979) 696-6767 • ctex@goodwinlasiter.com
1609 S. CHESTNUT ST., SUITE 202 • LUFKIN, TEXAS 75901 • (936) 637-4900 • admin@goodwinlasiter.com

D:\600\600020\600020 - KENT STREET.DWG 2005/10/27 © 15:46



Note: The following items were designed by the City of Bryan:
1) Size of waterline
2) Size of box culverts
3) Size of curb inlets
Jayson Barkncht
Jayson Barkncht, Phd, P.E.
on behalf of the City of Bryan

CITY OF BRYAN JOB# 332/611-DE-0404 - KENT STREET EXTENSION

- GENERAL NOTES**
- CONSTRUCTION SHALL BE ACCOMPLISHED IN ACCORDANCE WITH THE RULES AND REGULATIONS OF THE CITY OF BRYAN AND THESE SPECIFICATIONS/PLANS.
 - CONTRACTOR SHALL VISIT THE CONSTRUCTION LOCATION AND FAMILIARIZE THEMSELVES WITH THE WORKING CONDITIONS (TRAFFIC, CLEARING, PROPOSED/EXISTING UTILITIES, PAVING, DRAINAGE) OF THE SITE BEFORE BIDDING.
 - CONTRACTOR IS TO DETERMINE ALL QUANTITIES OF WORK PRIOR TO BIDDING TO PROVIDE A COMPLETE AND APPROVED PROJECT TO THE CITY.
 - THE CONTRACTOR IS REQUIRED TO ATTEND A PRE-CONSTRUCTION MEETING WITH CITY ENGINEER, CITY INSPECTOR AND CONSULTING ENGINEER PRIOR TO STARTING WORK. NO WORK IS TO BE PERFORMED UNTIL THIS MEETING IS COMPLETED AND A WRITTEN NOTICE TO PROCEED IS ISSUED BY THE CITY ENGINEER TO THE CONTRACTOR. MONTHLY CONSTRUCTION MEETINGS ON SITE DURING CONSTRUCTION ARE ALSO TO BE SCHEDULED WITH THE CITY ENGINEER AND INSPECTOR.
 - IN THE ABSENCE OF SPECIFIC REQUIREMENTS FOR ANY WORK, CONTRACTOR SHALL COORDINATE WITH CITY INSPECTOR. PROCEEDING WITHOUT PROPER DIRECTION FROM THESE PARTIES WILL BE AT THE CONTRACTORS SOLE RISK. CONTRACTORS ARE NOT TO PROCEED WITH ANY WORK WITHOUT PROPER AUTHORIZATION OF THE CITY ENGINEER.
 - CONTRACTOR TO MAINTAIN SITE IN "FIRST CLASS" NEAT CONDITION. WORK SITE SHALL BE CLEANED UP AT END OF EACH DAY.
 - CONTRACTOR SHALL COORDINATE SEQUENCE OF CONSTRUCTION WITH CITY ENGINEER'S OFFICE.
 - CONTRACTOR SHALL VERIFY LOCATION OF ALL EXISTING UTILITIES AND SERVICE LINES PRIOR TO EXCAVATING FOR UTILITY PLACEMENT. LOCATING METHODS INCLUDE, BUT ARE NOT LIMITED TO: LOCATING SERVICES, "POT HOLING" WITH WATER, SPOT DIGGING, ETC.
 - CONTRACTOR TO PROTECT UTILITIES FROM DAMAGE DURING CONSTRUCTION. CONTRACTOR SHALL REPAIR DAMAGES RESULTING FROM THEIR ACTIVITIES. COSTS FOR REPAIRS ARE THE RESPONSIBILITY OF THE CONTRACTOR.
 - CONTRACTOR SHALL NOTIFY AND CITY ENGINEER'S OFFICE IMMEDIATELY WHERE UNKNOWN UTILITIES ARE ENCOUNTERED IN CONSTRUCTION.
 - CONTRACTOR TO COORDINATE WORK WITH THE FOLLOWING UTILITY COMPANIES, AGENCIES, AND THE CITY:
WATER & SEWER CITY OF BRYAN. (979)209-5900
GAS ATMOS GAS. (979)774-2506/(979)255-4511
ELECTRIC. BTU. (979)821-5700
CABLE COX COMMUNICATIONS. (979)693-8885
PETROLEUM BWOC. (979)776-0285/(979)778-8046
TELEPHONE VERIZON (979)821-4536
 - CONTRACTOR TO CONTACT UTILITY, PIPELINE COMPANIES FORTY-EIGHT (48) HOURS IN ADVANCE OF WORK IN THE VICINITY OF THEIR LINES. TEXAS ONE CALL SYSTEM IS ENCOURAGED.
 - CONTRACTOR TO MAINTAIN CLEARANCE OF ALL EXISTING UTILITIES AS REQUIRED BY THE TEXAS COMMISSION ON ENVIRONMENTAL QUALITY (TCEQ) AND THESE PLANS.
 - REMOVE AND DISPOSE OF ALL MATERIALS AND STRUCTURES THAT ARE TO BE DEMOLISHED AND NOT NOTED FOR SALVAGE TO CONTRACTOR DESIGNATED DISPOSAL AREA. EXISTING CURBS, CULVERTS, GRAVEL ROADWAY AND DRAINAGE RELATED STRUCTURES WITHIN RIGHT-OF-WAY ARE TO BE REMOVED COMPLETELY. THIS WORK SHALL BE DONE IN ACCORDANCE W/ TxDOT STANDARD SPECIFICATION 100 "PREPARING R.O.W."
 - CONTRACTOR IS RESPONSIBLE FOR IMPLEMENTING AND MAINTAINING THE TRAFFIC PLAN. PROVIDE PROPER SIGNING FOR CONSTRUCTION, SAFETY, AND ROUTING OF TRAFFIC. POSITIONING AND CONTENT OF SIGNS, BARRICADES AND FLAGGING SHALL BE IN ACCORDANCE WITH THE CURRENT TEXAS MUTCD.
 - CONTRACTOR TO PROVIDE BARRICADES, SIGNS, AND LIGHTING AROUND ALL OPEN CUTS ALONG STREETS IN ACCORDANCE WITH THE TEXAS MUTCD.
 - CONTRACTOR TO MAINTAIN ACCESS TO RESIDENCES/BUSINESSES. DRIVE-WAYS SHALL NOT BE IMPASSABLE OVERNIGHT.
 - A FIELD SET OF AS-BUILT DRAWINGS SHOULD BE MAINTAINED BY THE CONTRACTOR FOR TRANSFER TO PERMANENT RECORD DRAWINGS. THESE DRAWINGS SHOULD INCLUDE MEASUREMENTS FROM EACH UNIT INSTALLED TO TWO PERMANENT OBJECTS. UTILITY SERVICE LOCATIONS SHOULD ALSO BE DOCUMENTED. PROJECT WILL NOT BE CLOSED OUT UNTIL CONTRACTOR HAS PROVIDED THESE FIELD SET(S) TO THE CITY ENGINEER'S OFFICE.
 - CONTRACTOR TO STORE MATERIALS AT LOCATION(S) APPROVED BY & COORDINATED WITH THE OWNER. EQUIPMENT IS TO BE STORED OVERNIGHT AT LOCATIONS SO AS NOT TO BLOCK STREETS OR DRIVES. MATERIALS ARE TO BE PROTECTED FROM DAMAGE BY THE ELEMENTS.
 - CONTRACTOR TO MAINTAIN ADEQUATE SITE DRAINAGE FACILITIES AS REQUIRED DURING CONSTRUCTION. PROTECT EXCAVATIONS FROM FLOODING DUE TO GROUNDWATER INFILTRATION AND RUN-OFF. INSURE THAT NO DRAINAGE ON OR OFF THE SITE IS BLOCKED BY PROPOSED CONSTRUCTION.
 - CONSTRUCTION AREAS ARE TO BE CLEARED/GRUBBED COMPLETELY OF TREES, BRUSH, STUMPS, ROOTS, PIPES, PAVEMENT AND ALL RUBBISH. COST OF CLEARING TO COMPLETE ALL IMPROVEMENTS TO BE INCLUDED IN BID TO THE CITY.
 - CONTRACTOR TO BE RESPONSIBLE FOR STORM WATER POLLUTION PREVENTION PLAN (SWPPP) AND EROSION CONTROL DURING AND AFTER CONSTRUCTION. CONTRACTOR SHALL INSTALL EROSION AND SILT CONTROL MEASURES AS REQUIRED DURING CONSTRUCTION AND SHALL REMOVE TEMPORARY MEASURES WHEN PERMANENT COVER IS ESTABLISHED.
 - CONTRACTOR IS RESPONSIBLE FOR O.S.H.A. ESTABLISHED TRENCH SAFETY AS DESCRIBED IN THE FEDERAL REGISTER 29 CFR PART 1926 FOR EXCAVATION EXCEEDING 5'. A TRENCH SAFETY PLAN SHOULD BE PREPARED AND A "COMPETENT PERSON" APPOINTED PRIOR TO ANY AND ALL EXCAVATING OPERATIONS EXCEEDING 5' DEPTH. THE PLAN IS TO BE PREPARED AND SEALED BY A REGISTERED TEXAS PROFESSIONAL ENGINEER AND SHALL BE SUBMITTED TO THE CITY OF BRYAN PRIOR TO ANY EXCAVATION ON THE PROJECT.
 - EXISTING GRADES SHALL BE RE-ATTAINED AND PROPOSED GRADES SHALL BE ATTAINED BY SHAPING BACKFILL MATERIAL BY CUT AND FILL OPERATIONS. FILL OPERATIONS ARE TO BE ACCOMPLISHED BY PLACING MATERIAL IN 6-INCH (LOOSE MEASURE) LIFTS AND 98% DENSITY AS DETERMINED BY ASTM D698 (STANDARD PROCTOR), AS NOTED IN DETAILS. CONTRACTORS (BIDDERS) ARE TO PERFORM THEIR OWN QUANTITIES DETERMINATION PRIOR TO BIDDING. ALL EARTHWORK TO BE INCLUDED IN BID.
 - FINISHED GRADES TO BE SLOPED TO PROVIDE PROPER DRAINAGE.
 - SELECT BORROW MATERIAL SHALL HAVE A PLASTICITY INDEX (PI) OF 4 TO 15.
 - CONTRACTORS ARE TO COORDINATE THE HOLDING/SUPPORT OF UTILITY POLES WHERE NECESSARY TO FACILITATE CONSTRUCTION. ALL COORDINATION WITH UTILITY COMPANIES IS TO BE INCLUDED WITH BID ITEMS FOR WORK TO BE PERFORMED.
 - CULVERTS DISTURBED/DAMAGED BY CONSTRUCTION ARE TO BE RESET/REPLACED AT NO ADDITIONAL COST.
 - ON CROSSING OF PAVED ROADS AND DRIVES WHERE TYPE OF CONSTRUCTION IS NOT OTHERWISE INDICATED, THE CONTRACTOR MAY DRILL IN LIEU OF OPEN-CUT AND PAVEMENT REPLACED. CONTRACTOR TO MAINTAIN ACCESS TO RESIDENCES. DRIVEWAYS SHALL NOT BE IMPASSABLE OVERNIGHT. DIRT OR GRAVEL DRIVES MAY BE OPEN CUT PROVIDED THEY ARE BACK FILLED AS DETAILED.
 - ALL EARTHENED AREAS DISTURBED BY THE CONTRACTOR'S OPERATIONS SHALL BE REGRADED, HYDROMULCHED, AND FERTILIZED. SODDING IS REQUIRED WHEN FINISHED SLPES ARE 5:1 OR GREATER. THIS WORK SHALL BE DONE AS OUTLINED IN THE SPECIFICATION.
 - ITEMS ASSOCIATED WITH GAS SYSTEM ARE TO REMAIN. CONFLICTS TO BE REPORTED TO CITY INSPECTOR. GAS FACILITY OWNER WILL BE NOTIFIED TO ADDRESS THE CONFLICT.
 - CONTRACTOR TO HAVE ANY EXISTING UTILITIES PRECISELY LOCATED INCLUDING DEPTH PRIOR TO EXCAVATION BEGINNING.
 - SURVEYING DATA USED FOR THE BASIS OF DESIGN WAS PROVIDED BY MCCLURE & BROWNE ENGINEERING/ SURVEYING, INC. CONTRACTOR TO VERIFY COORDINATE AND BENCH MARKS WITH THE SURVEYOR PRIOR TO COMMENCING WORK.

GENERAL NOTES

10

LEGEND

7

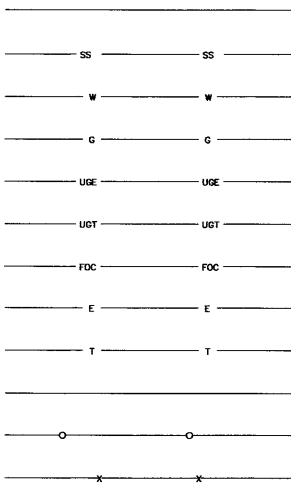
PAVING NOTES

- CONCRETE DESIGN, MATERIALS, AND WORKMANSHIP TO CONFORM TO THE CURRENT EDITION OF THE FOLLOWING STANDARDS UNLESS OTHERWISE MODIFIED ON THE DRAWINGS IN THE SPECIFICATIONS:
ACI 318-02 "BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE"
ACI 315-99 "DETAILS AND DETAILING OF CONCRETE REINFORCEMENT"
NCTCOG STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION.
- MATERIALS TO BE AS FOLLOWS:
CONCRETE — 28-DAY COMPRESSIVE STRENGTH = 4000 PSI (F'C)
REINFORCING STEEL — ASTM A615, GRADE 60
- THE FOLLOWING CONCRETE COVER SHALL BE PROVIDED FOR REINFORCING STEEL, UNLESS OTHERWISE SHOWN:
3" — CONCRETE CAST DIRECTLY AGAINST THE GROUND
2" — FORMED SURFACES OR TOP OF FINISHED SURFACES
- LAP REINFORCING STEEL IN ACCORDANCE WITH ACI 318-02 (CLASS B).
- PAVING RECONSTRUCTION IS NOT TO PROCEED UNTIL UTILITY & DRAINAGE CONSTRUCTION IS SUCCESSFULLY TESTED, NEW SYSTEM IS OPERATING, & ABANDONMENT OF OLD SYSTEM IS COMPLETE.
- EXCESS DIRT FROM STREET EXCAVATION SHALL BE DISPOSED OF BY THE CONTRACTOR.
- FINISHED GRADES TO BE SLOPED TO PROVIDE PROPER DRAINAGE.
- STREET CONSTRUCTION SHALL BE ACCOMPLISHED IN ACCORDANCE WITH THE RULES AND REGULATIONS OF THE CITY OF BRYAN AND THESE SPECIFICATIONS/PLANS.
- PAVEMENT TIE-INS TO EXISTING PAVEMENT TO BE SUBSIDIARY TO THE PERTINENT BID ITEMS.
- COORDINATE CONSTRUCTION CLOSELY WITH CITY TO ASSURE NO CONFLICTS BETWEEN GRADING, DRAINAGE AND PAVING IMPROVEMENTS.
- PROPOSED PAVEMENT ELEVATIONS SHOWN ARE TOP OF FINISHED PAVEMENT (P), OR CURB (T) AS NOTED. PROPOSED FLOWLINE ELEVATIONS ARE NOTED (FL).
- PROVIDE EXPANSION JOINTS AND CONTROL JOINTS IN ACCORDANCE WITH CITY OF BRYAN STANDARD SPECIFICATION AND DETAILS. CURB AND GUTTER SHALL HAVE 1/2" PREMOLED OR 3/4" REDWOOD OR CYPRESS EXPANSION JOINT EVERY 50 FT. AND SHALL HAVE GROOVED CONTROL JOINTS AT 10 FT. ALL JOINTS WILL BE SEALED WITH SIKAFLEX LM OR APPROVED EQUAL.
- ALL FORMS MUST BE WELL STAKED AND THOROUGHLY BRACED SO THAT TAMPING OF MATERIALS WILL NOT DISTURB THEM OR MOVE THEM OUT OF LINE.
- CARE MUST BE TAKEN THAT THE CURB AND GUTTER SHALL NOT SHOW TROWEL MARKS, HIGH SPOTS, SAGS OR HORIZONTAL DEFLECTIONS AND ANY SECTION SHOWING SAME AFTER BEING FINISHED WILL BE CONDEMNED BY THE CITY OF BRYAN AND MUST BE REPLACED BY THE CONTRACTOR.
- THE COMPLETED PAVEMENT SHALL BE CURED BY A METHOD APPROVED BY THE CITY OF BRYAN. LIQUID MEMBRANE CURING COMPOUND WHICH COMPLIES WITH THE "STANDARD SPECIFICATIONS FOR LIQUID MEMBRANE FORMING COMPOUNDS FOR CURING CONCRETE", ASTM C309 TYPE 2 WHITE PIGMENTED MAY BE USED.

PAVING NOTES

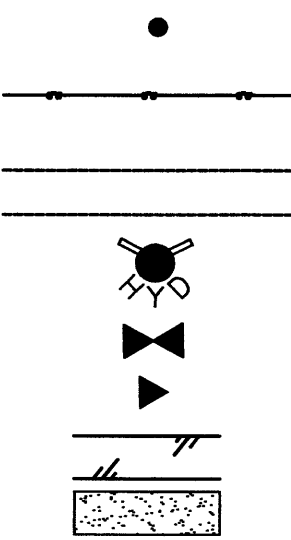
8

Existing



- UNDERGROUND PETROLEUM/PIPELINE
- SANITARY SEWER (SIZE SHOWN)
- WATER LINE (SIZE SHOWN)
- NATURAL GAS LINE
- UNDERGROUND ELECTRIC LINE
- UNDERGROUND TELEPHONE LINE
- UNDERGROUND FIBER OPTIC CABLE
- OVERHEAD ELECTRIC
- OVERHEAD TELEPHONE
- OVERHEAD CABLE TV
- CHAINLINK FENCE
- BARBED WIRE FENCE
- FIRE HYDRANT
- WATER VALVE
- SANITARY SEWER MANHOLE
- SANITARY SEWER CLEANOUT
- POWER POLE
- WATER METER
- TELEPHONE BOX
- MAILBOX
- BENCH MARK/CONTROL POINT

Proposed



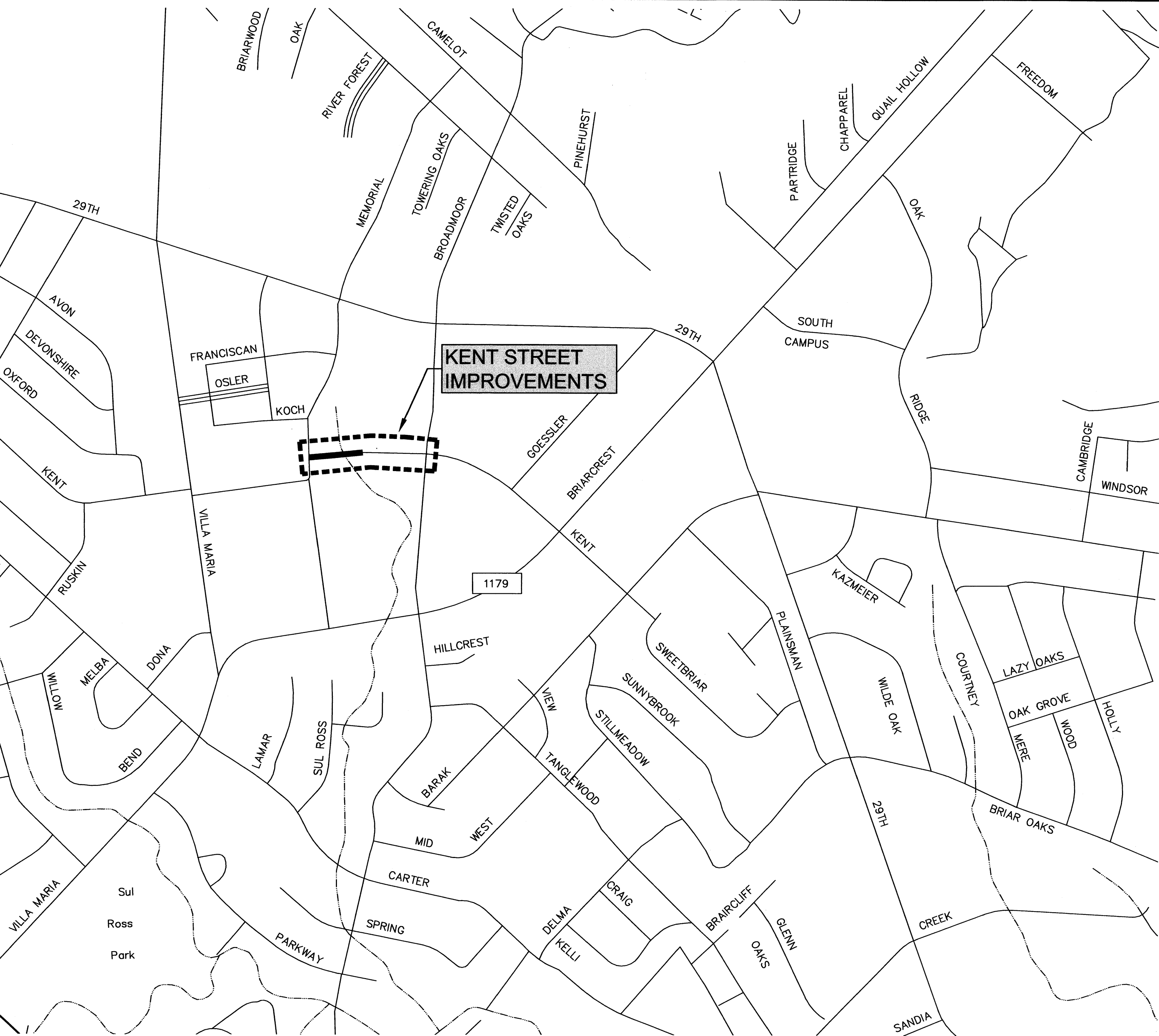
VICINITY MAP

BENCH MARK LIST

6

UTILITY LOCATING SERVICE

3



Bench Mark List		
NO.	DESCRIPTION	ELEVATION
1540	CHISELED SQUARE IN BACK OF CURB ON SOUTH SIDE OF KENT STREET APPROXIMATELY 200' EAST OF THE BROADMOOR/KENT INTERSECTION	321.61
2187	CHISELED SQUARE IN EXISTING INLET ON NORTH SIDE OF KENT STREET APPROXIMATELY 35' NORTHEAST OF THE MEMORIAL/KENT INTERSECTION	329.08
1539	CHISELED "X" IN CONCRETE ON THE EAST SIDE OF BROADMOOR APPROXIMATELY 82' NORTHEAST OF THE BROADMOOR/KENT INTERSECTION	327.59
1538	CHISELED "X" IN CONCRETE ON THE EAST SIDE OF BROADMOOR APPROXIMATELY 85' NORTHEAST OF THE BROADMOOR/KENT INTERSECTION	327.77

NOTE: CONTRACTOR SHALL NOTIFY ONE CALL SYSTEM AND SHALL NOTIFY ANY OTHER UTILITIES WHICH ARE SUSPECTED IN THE PROJECT AREA WHO MAY NOT SUBSCRIBE TO THE TEXAS ONE CALL SYSTEM.



Kent Street Extension
City of Bryan
Bryan, Texas
General Notes & Project Information

CONTRACT NO.
600020
SHEET NO.

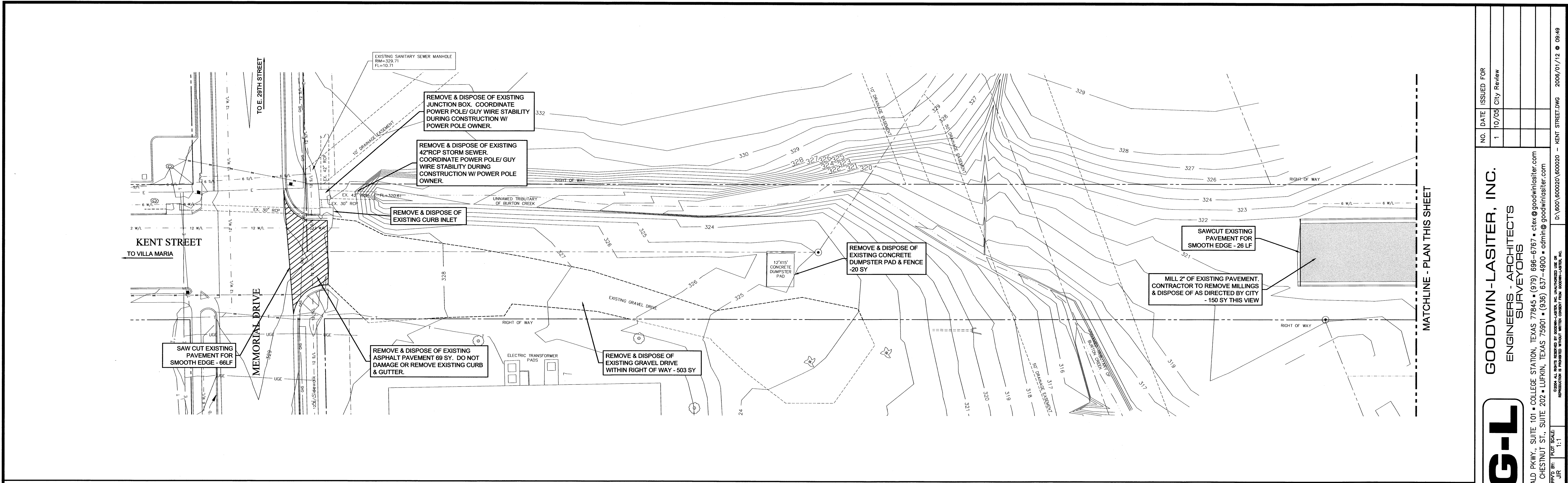
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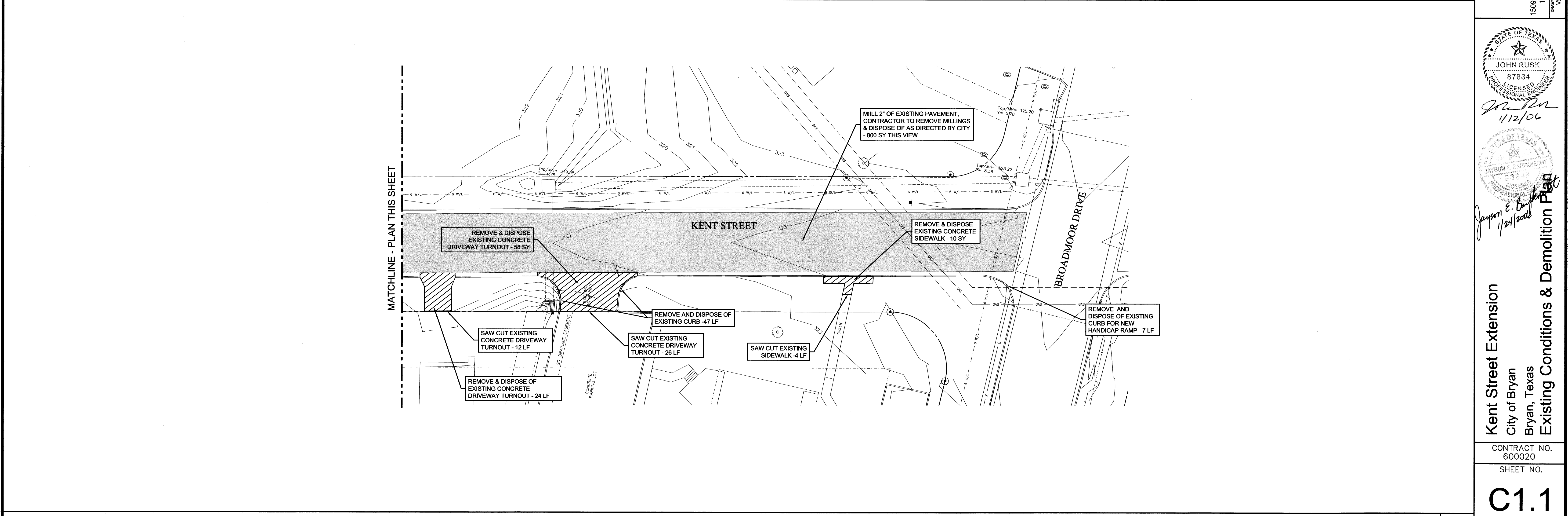
GOODWIN-LASITER, INC.
ENGINEERS - ARCHITECTS
SURVEYORS
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1609 S. CHESTNUT ST., SUITE 202 • LURKIN, TEXAS 75501 • (936) 637-4900 • admin@goodwinlaster.com

NO.	DATE	ISSUED FOR
1	10/05	City Review

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EXISTING CONDITIONS AND DEMOLITION PLAN 1'-20' 1



EXISTING CONDITIONS AND DEMOLITION PLAN 1'-20' HORIZONTAL 1'-2' VERTICAL 1

NO. DATE ISSUED FOR
1 10/05 City Review

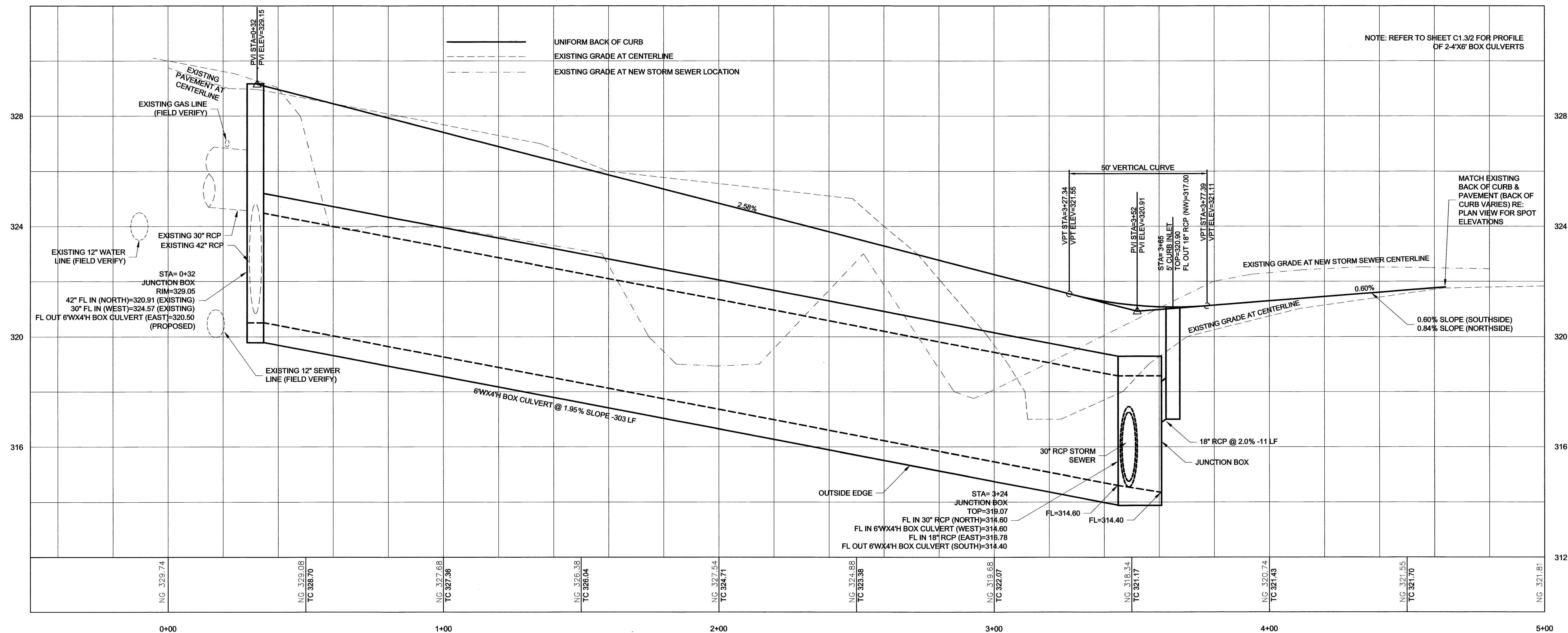
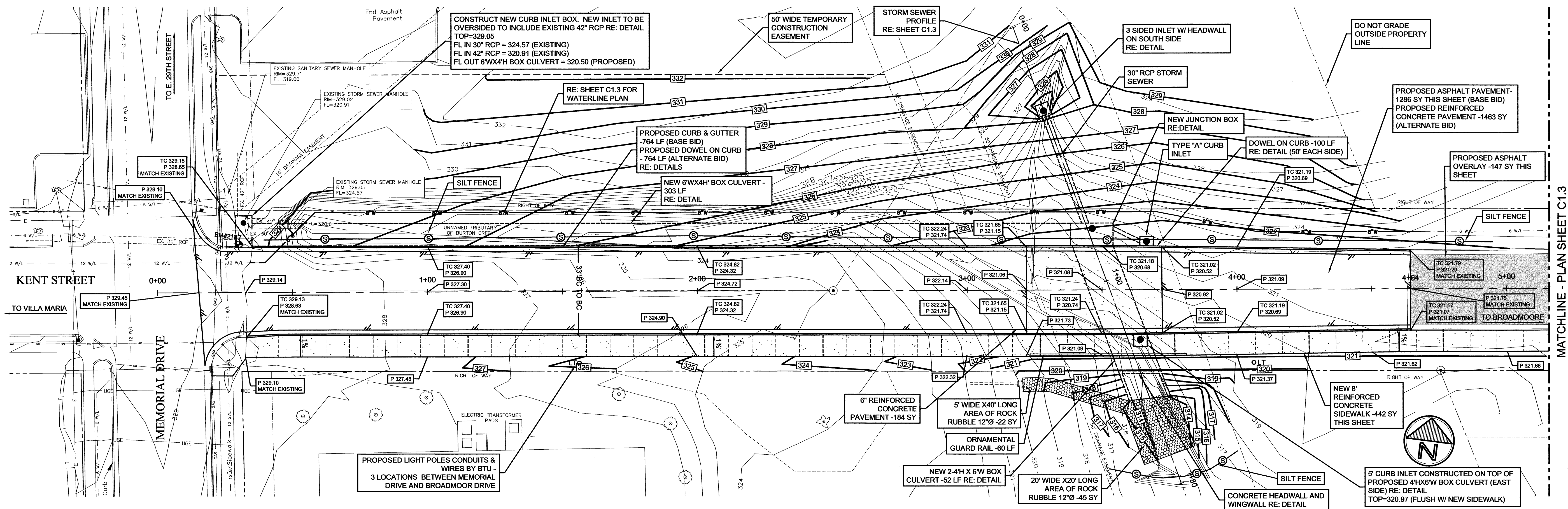
GOODWIN-LASITER, INC.
ENGINEERS - ARCHITECTS
SURVEYORS
1509 EMERALD PKWY., SUITE 101 • COLLEGE STATION, TEXAS 77845 • (979) 686-6767 • clex@goodwinlaster.com
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DRAWN BY: VS
CHECKED BY: JLR
PROJECT SCALE: 1"=1'
APPROVED BY: JVS

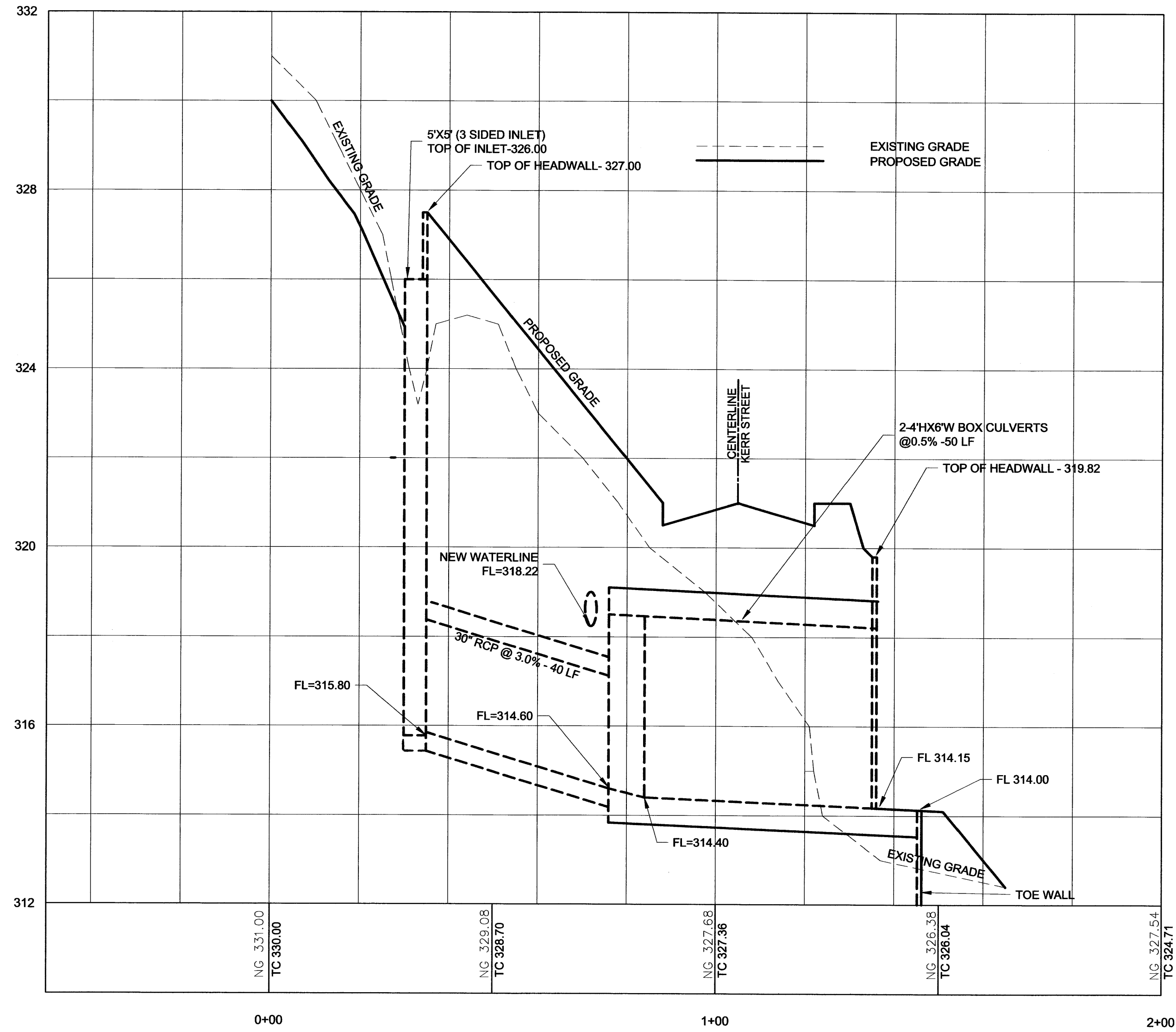
STATE OF TEXAS
JOHN RUSK
87834
LICENSED PROFESSIONAL ENGINEER
11/2/06

STATE OF TEXAS
JAYSON E. BULLINGTON
11/24/2006
LICENSED PROFESSIONAL ARCHITECT

Kent Street Extension
City of Bryan
Bryan, Texas
Existing Conditions & Demolition Plan

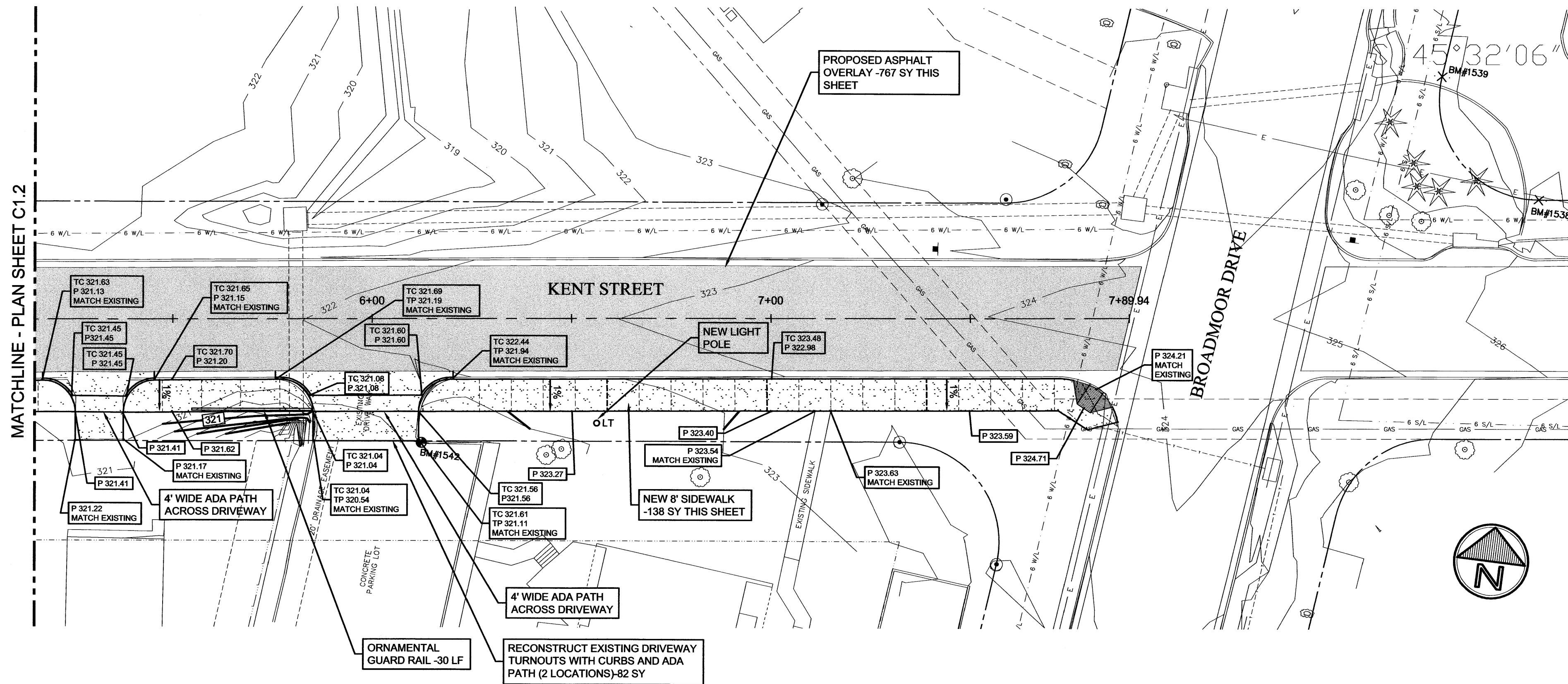
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600020
SHEET NO.
C1.1





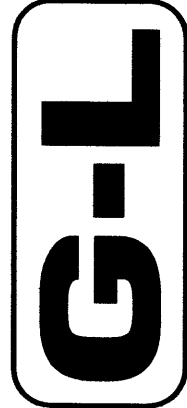
STORM SEWER PROFILE

1"=20' HORIZONTAL 1"=2' VERTICAL 2



SIDEWALK PLAN

1"=20' 1



GOODWIN-LASITER, INC.
ENGINEERS - ARCHITECTS
SURVEYORS

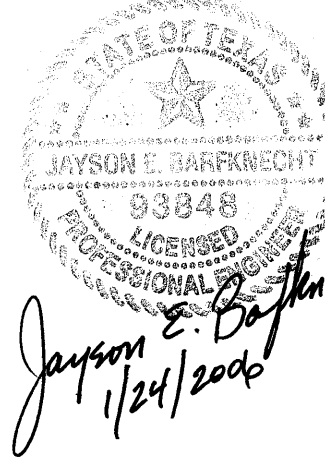
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APPROVED BY: JLR
DATE: 1/11/06

DESIGNED BY: JLR
DATE: 1/11/06

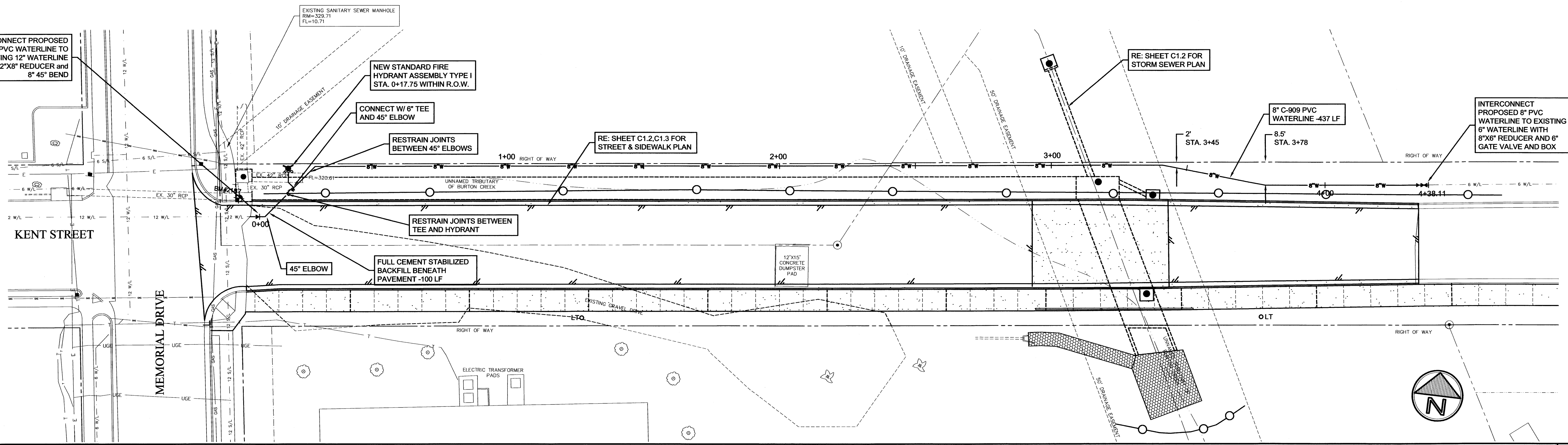
NO. DATE ISSUED FOR
1 10/05 City Review
2 1/06 ISSUED FOR BID

CONTRACT NO. 600020
SHEET NO. C1.3



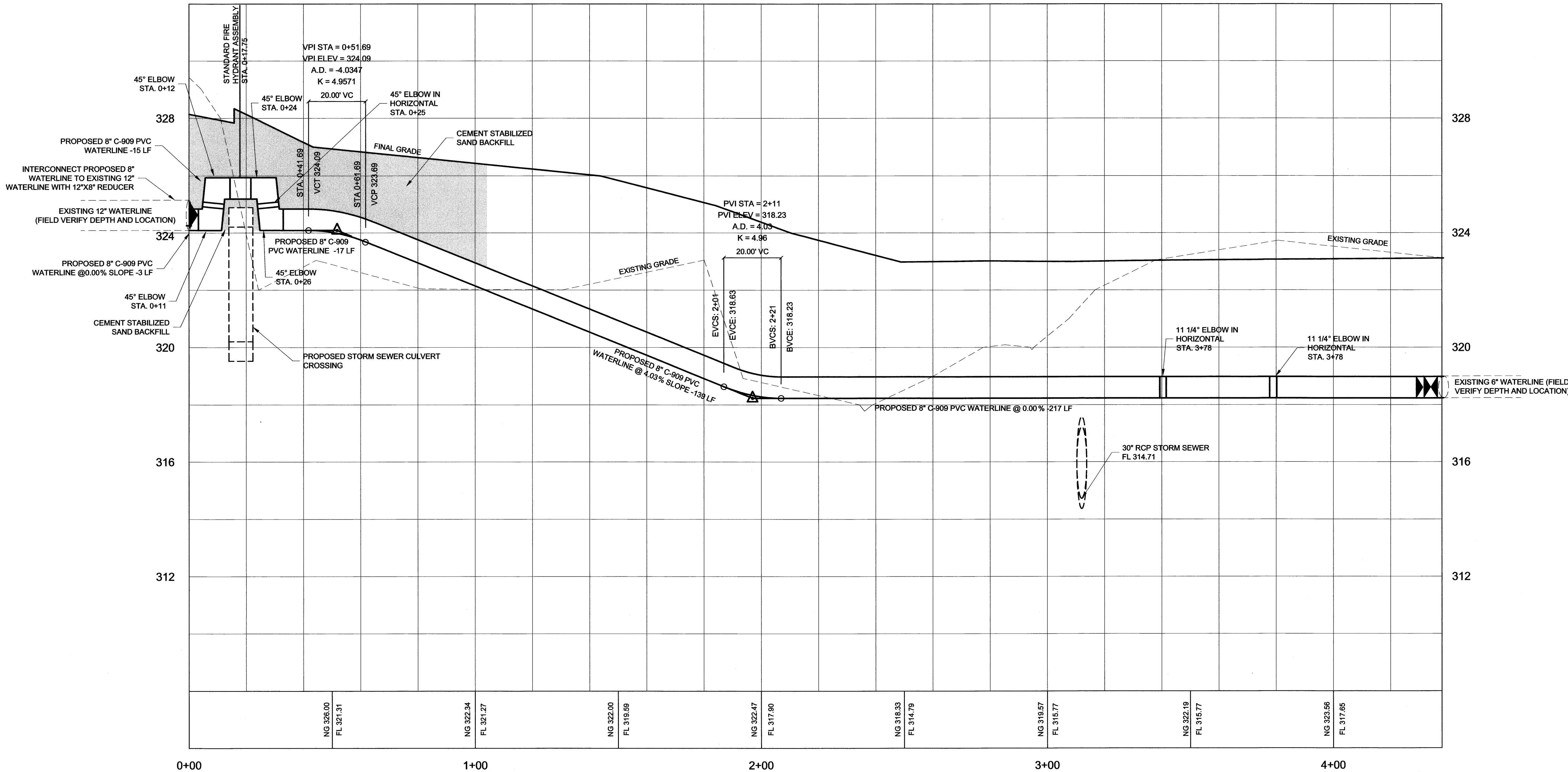
Kent Street Extension
City of Bryan
Bryan, Texas
Sidewalk Plan

CONTRACT NO. 600020
SHEET NO. C1.3



WATERLINE PLAN

1'-20' 1



WATERLINE PROFILE

1'-20' HORIZONTAL 1'-2' VERTICAL 1

NO.

DATE

ISSUED FOR

1

10/05

City Review

2

1/06

ISSUED FOR BID

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APPROVED BY: JLR

DATE: 1/24/2006

SCALE: 1:1

PROJECT: D:\60020\600020 - KENT STREET.DWG

2006/01/19 @ 16:32

STATE OF TEXAS

JOHN RUSK

87884

REGISTERED PROFESSIONAL ENGINEER

Jayson E. Baughman

1/24/2006

STATE OF TEXAS

JOYSON BAUGHMAN

93848

REGISTERED PROFESSIONAL ENGINEER

Kent Street Extension

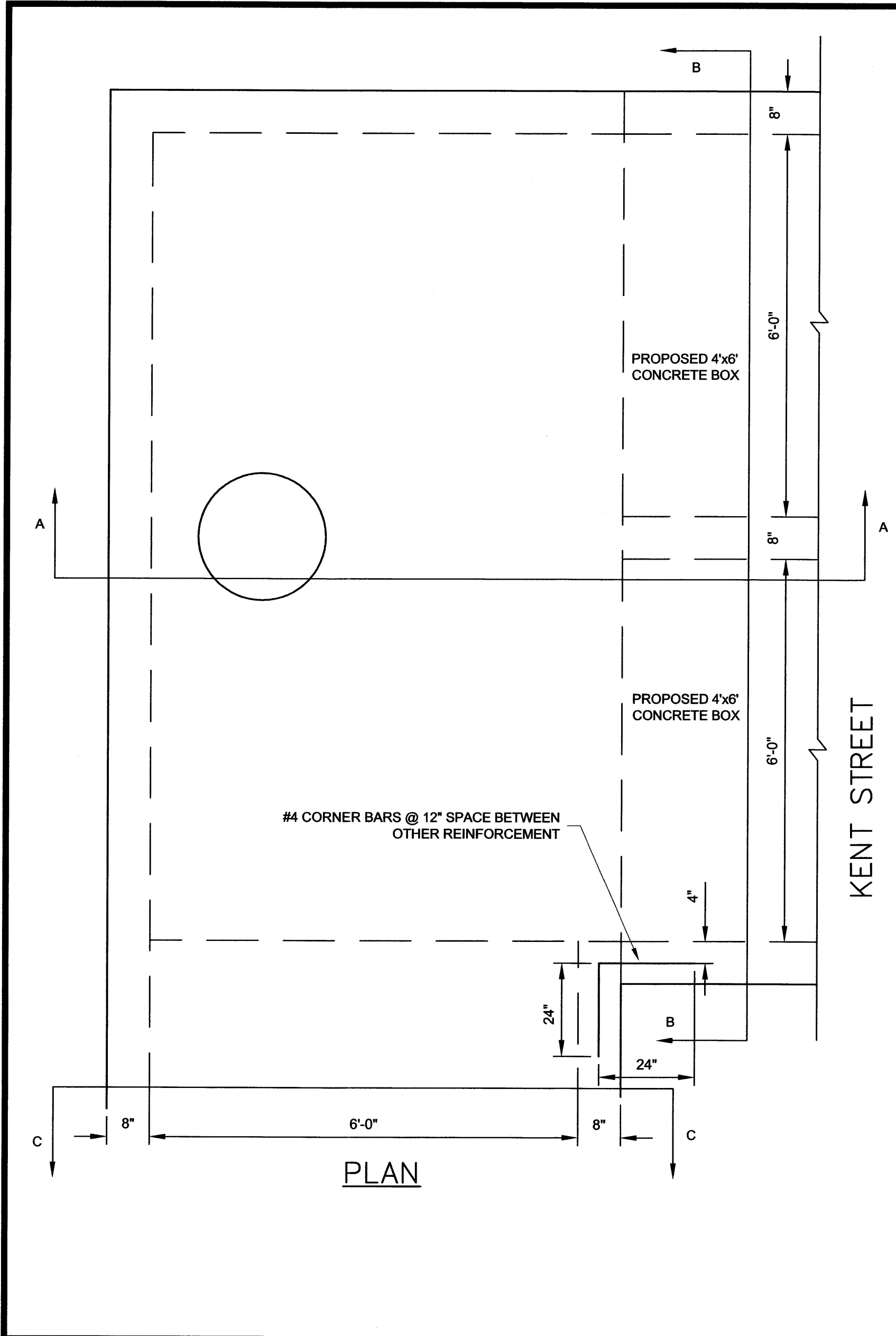
City of Bryan

Bryan, Texas

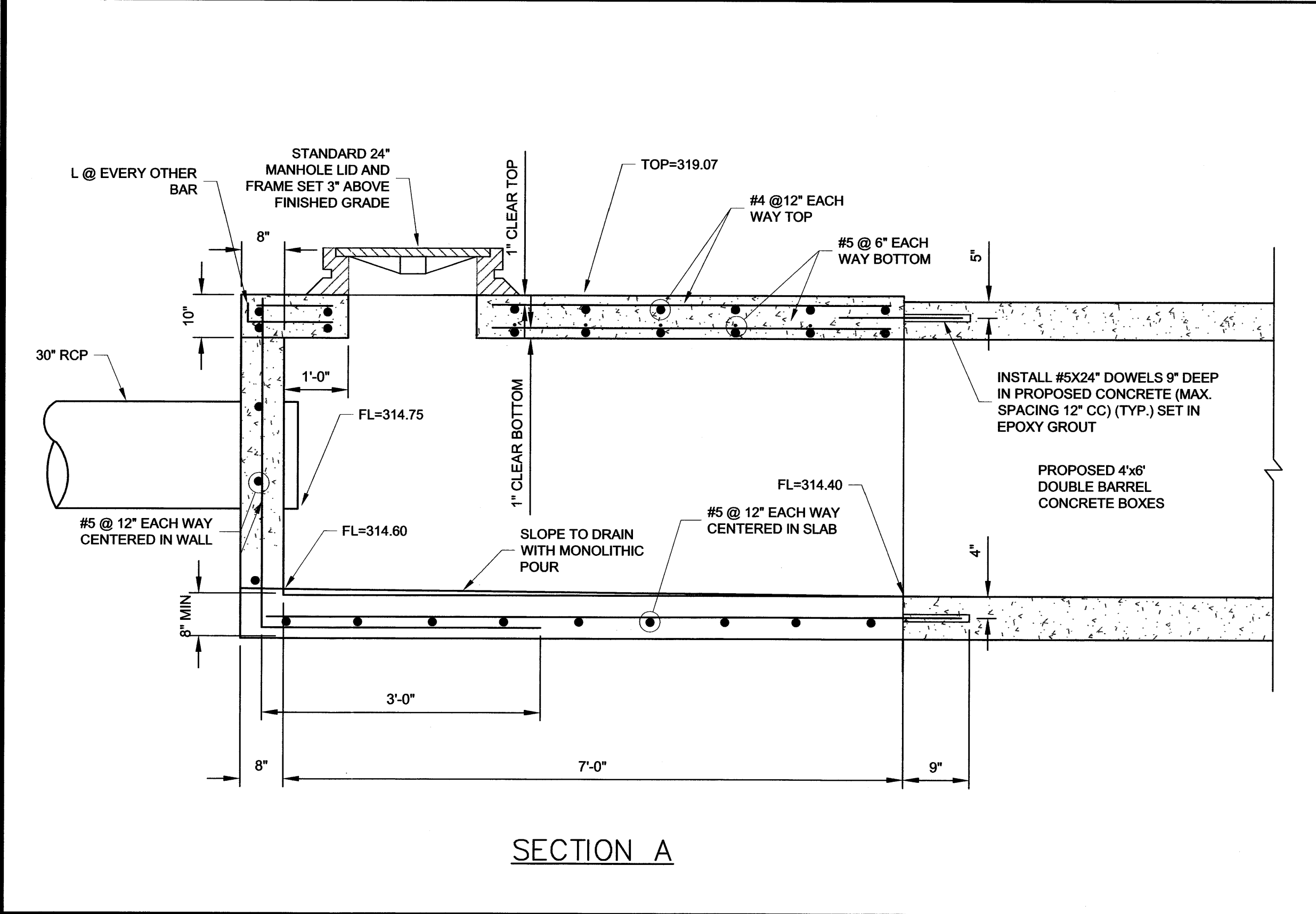
Waterline Plan & Profile

CONTRACT NO. 600020

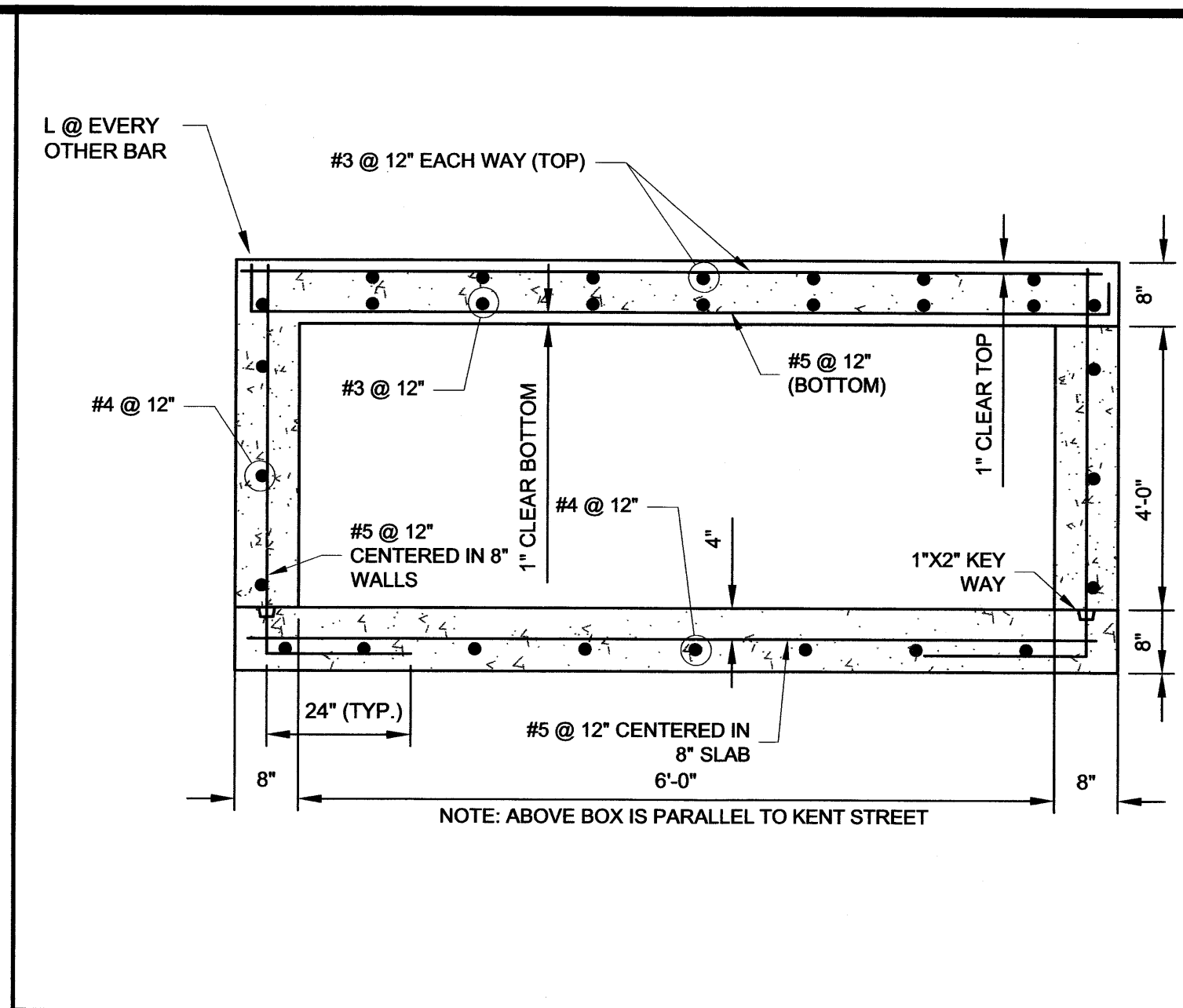
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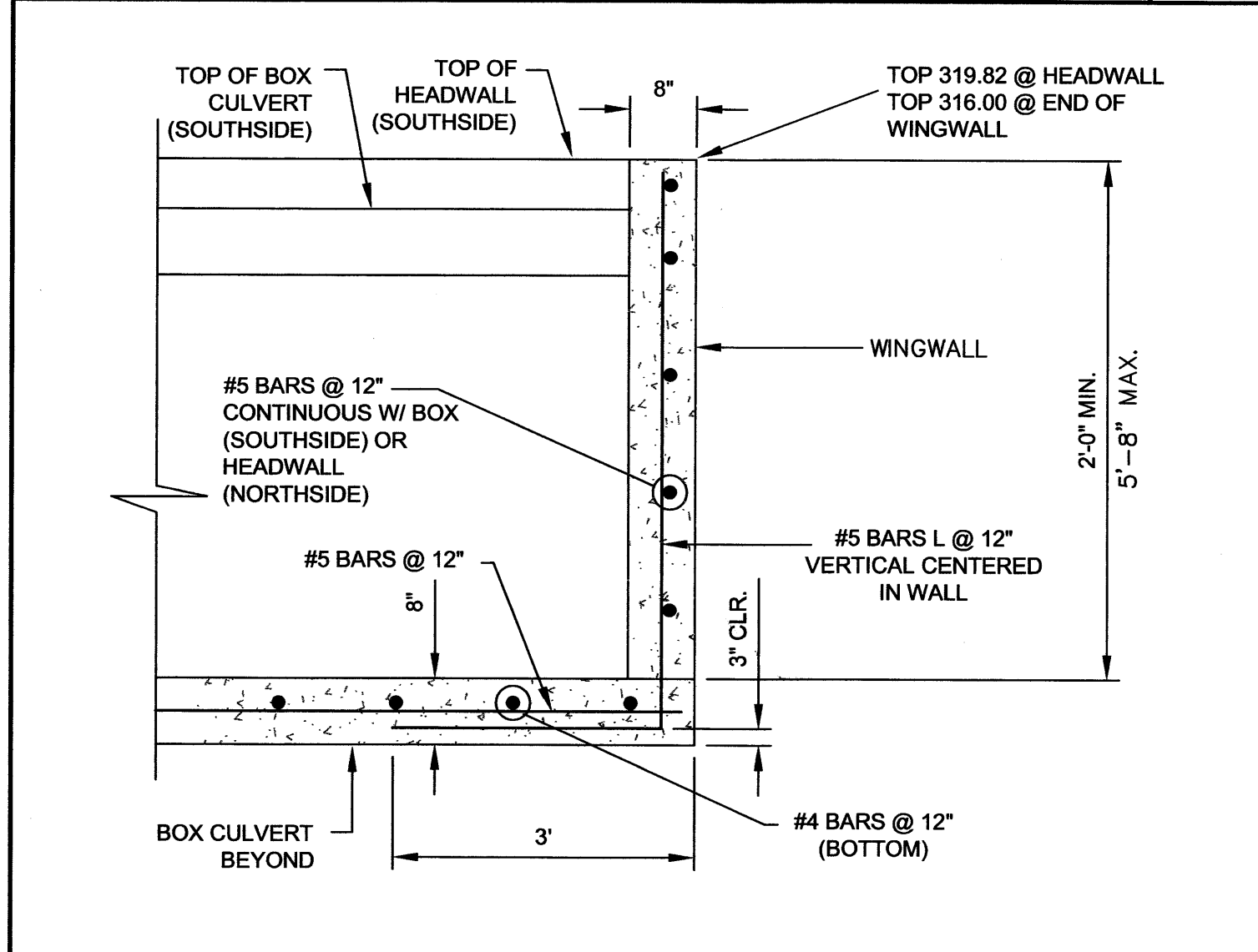
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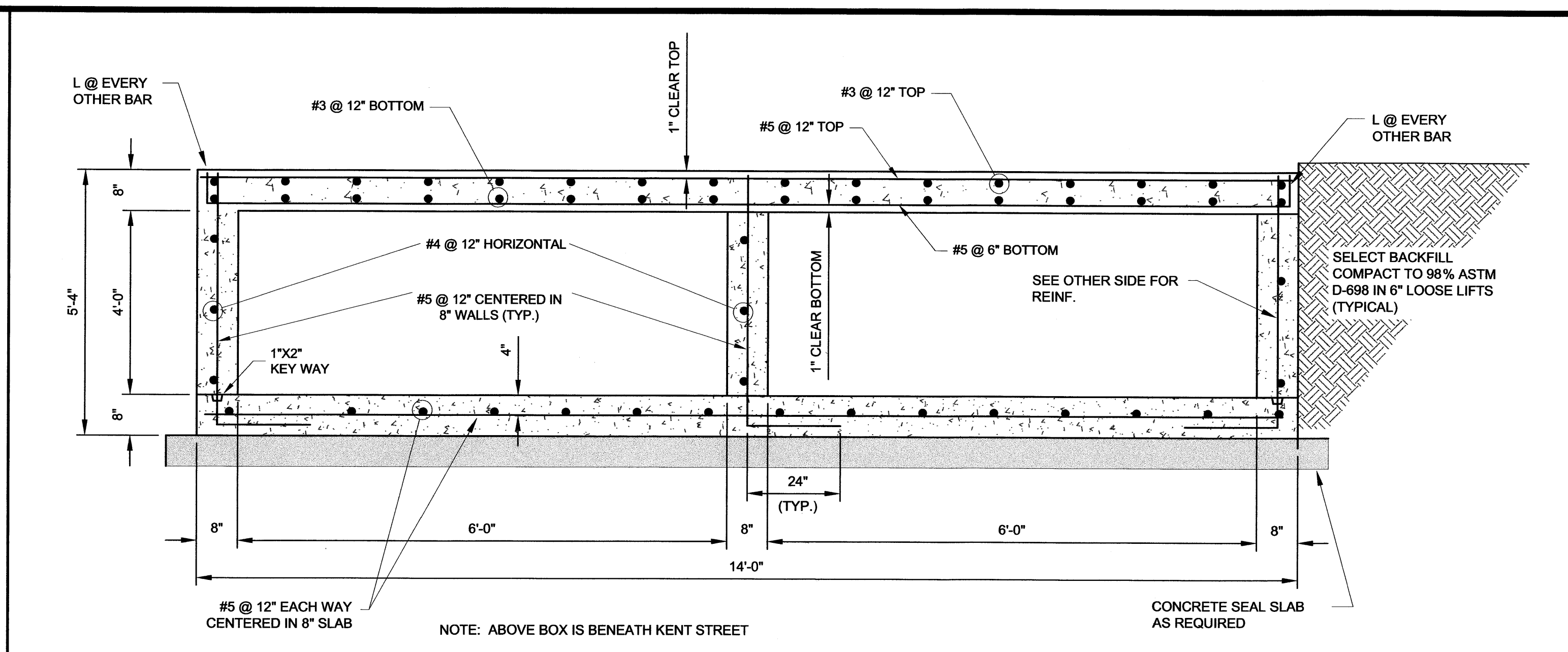
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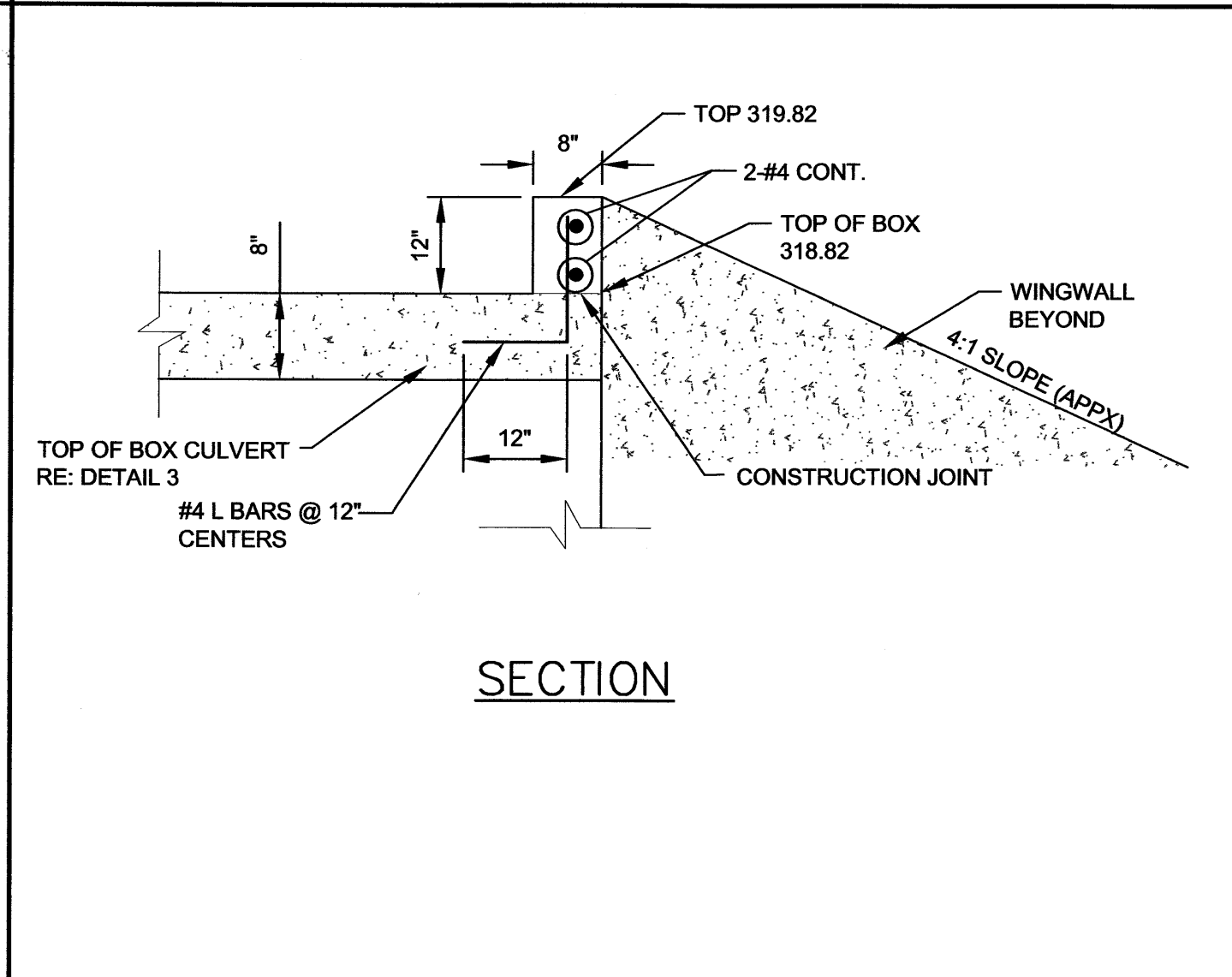
Section C (4'Hx6'W Box Culvert) N.T.S. 8



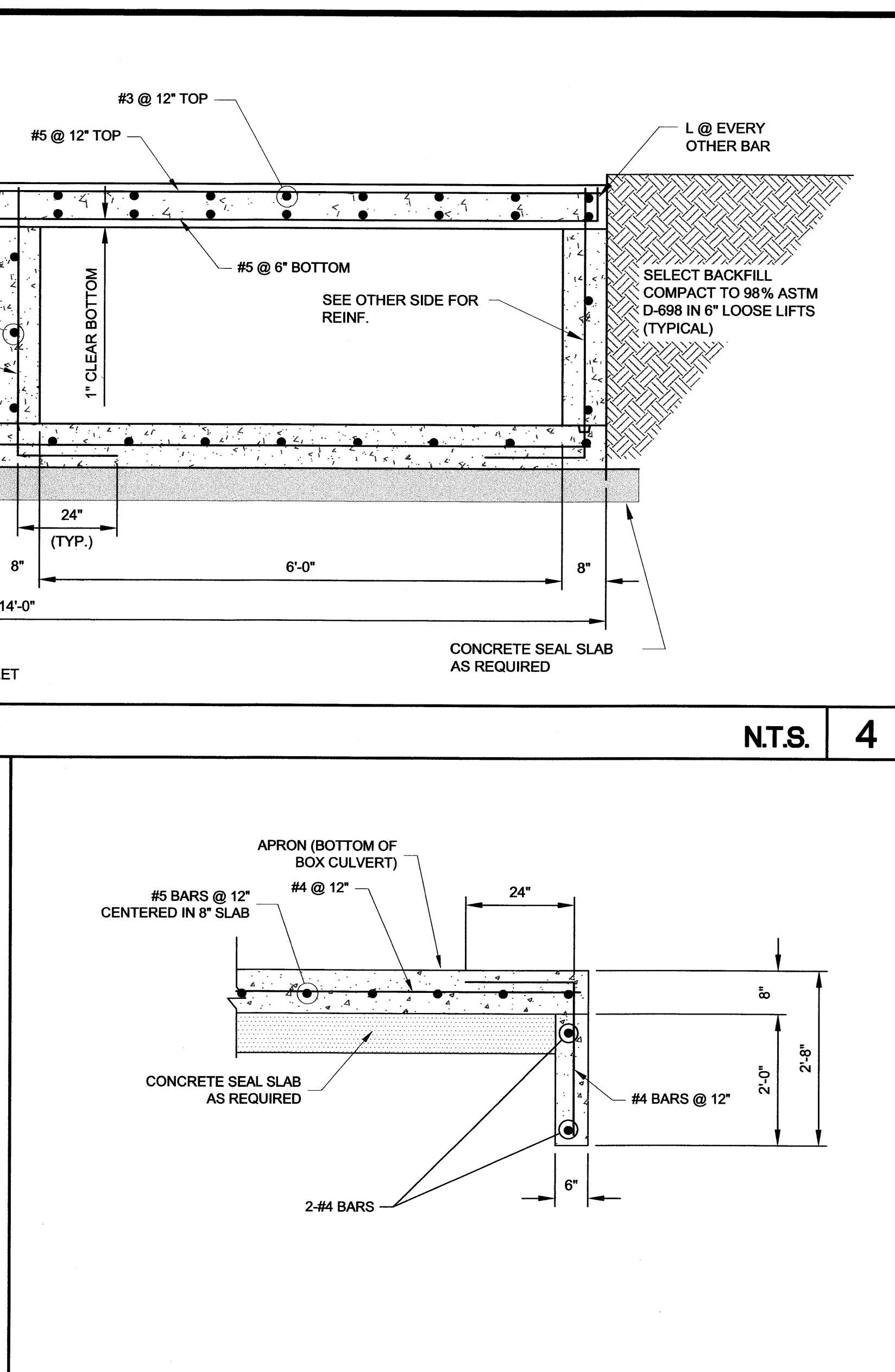
Section (Wingwall) N.T.S. 10



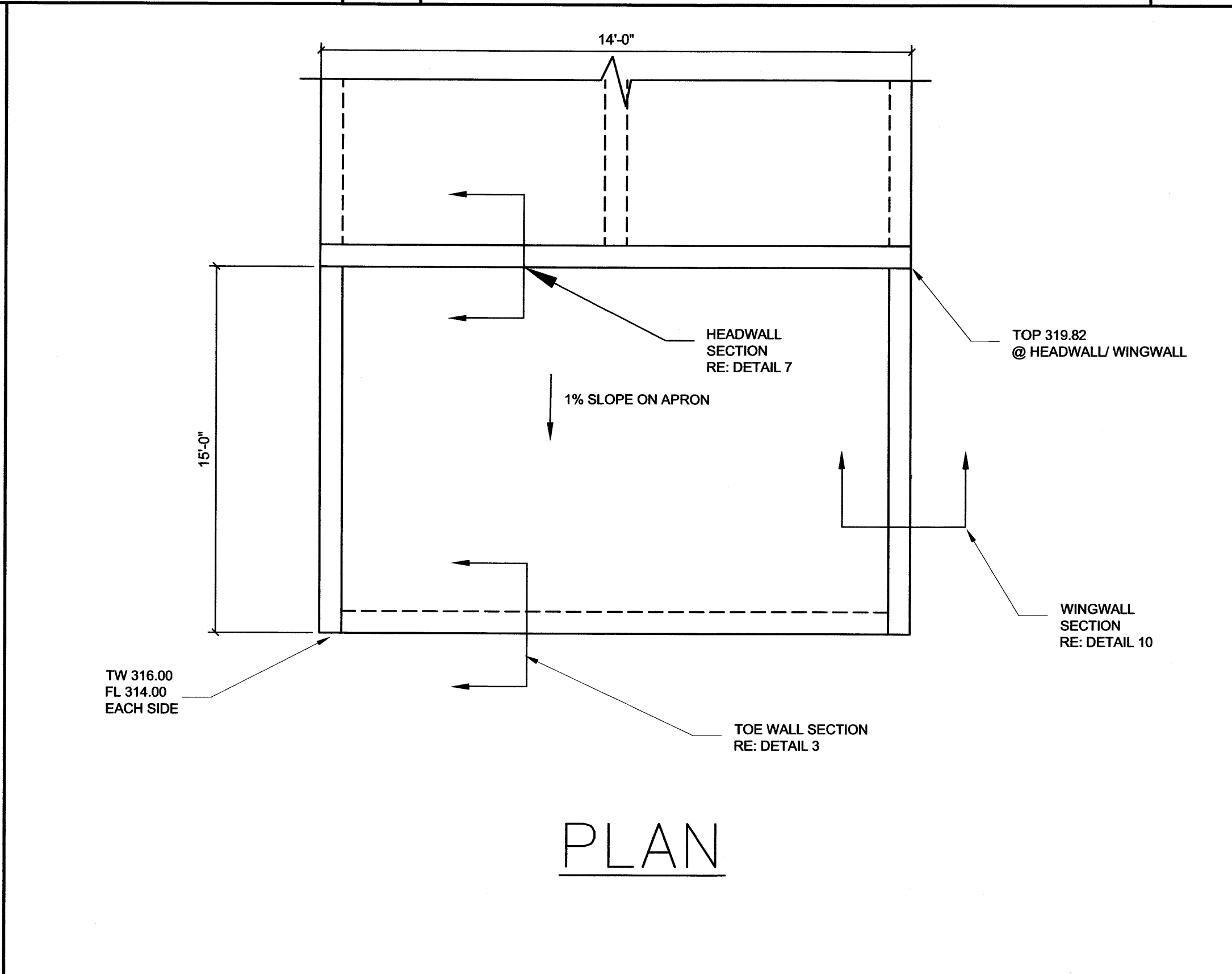
Section B (2-4'Hx6'W Box Culvert) N.T.S. 4



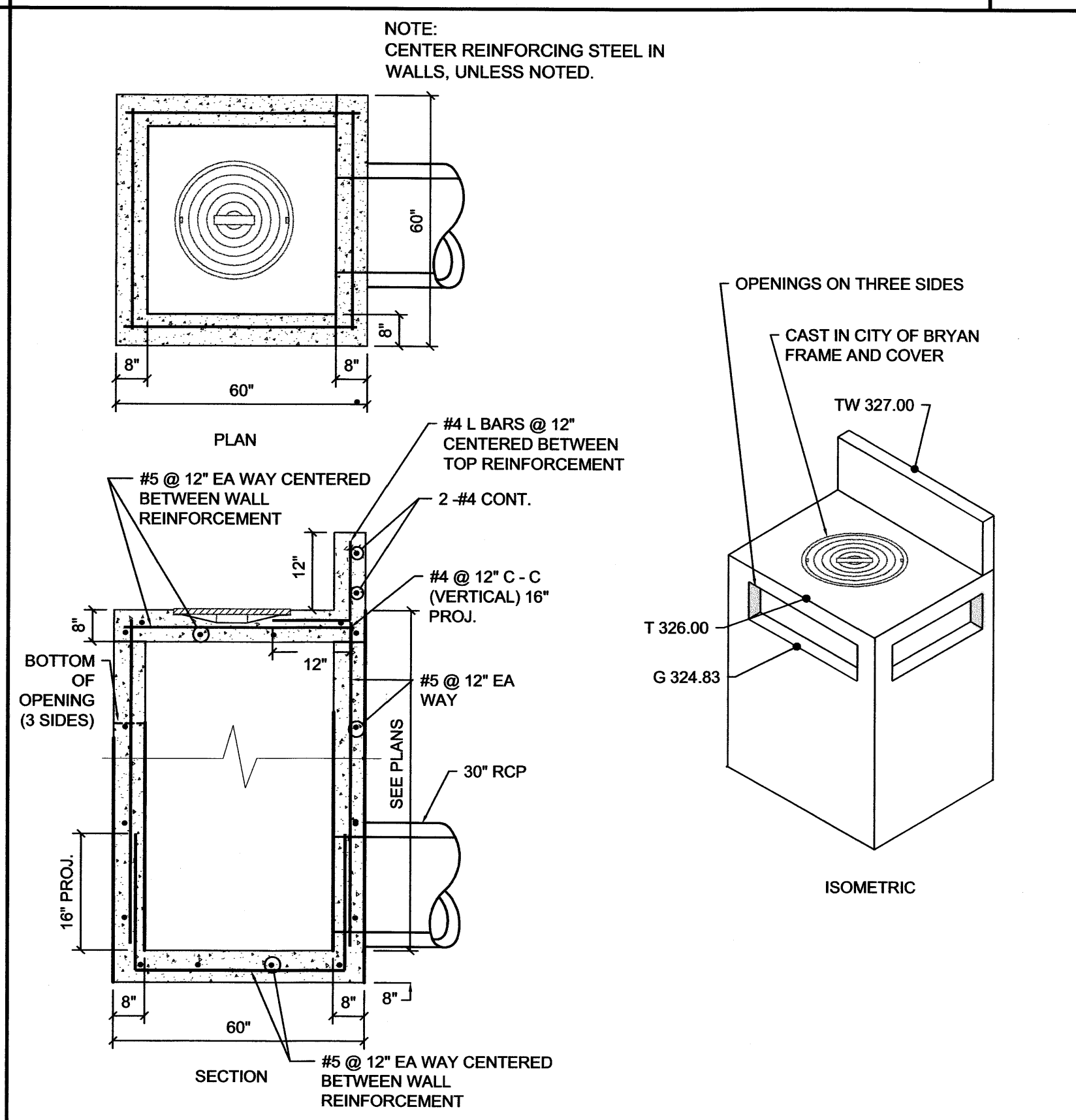
Section (Headwall Southside) N.T.S. 7



Section (Toe Wall) N.T.S. 3

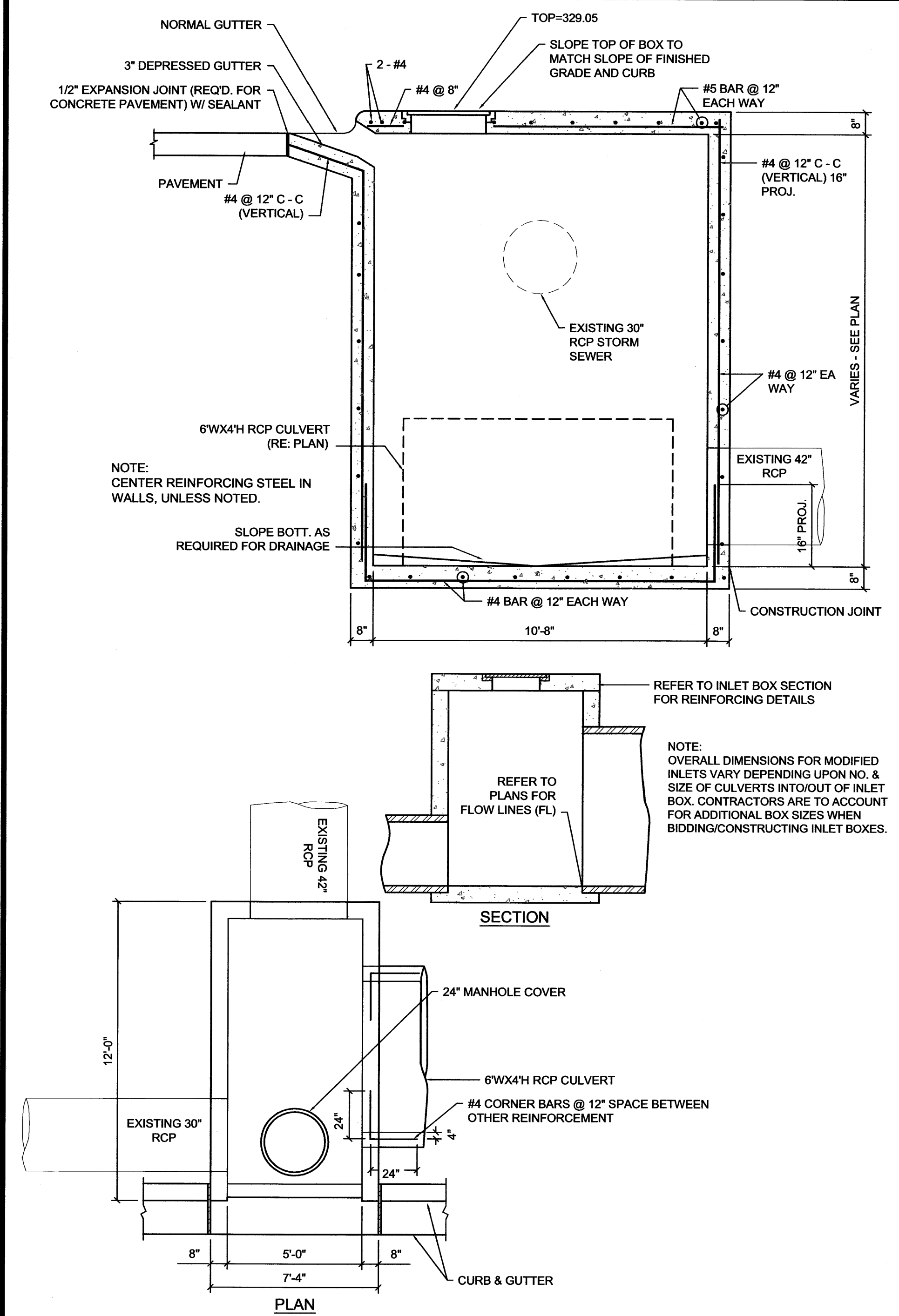


Headwall and Wingwall (Southside) N.T.S. 6

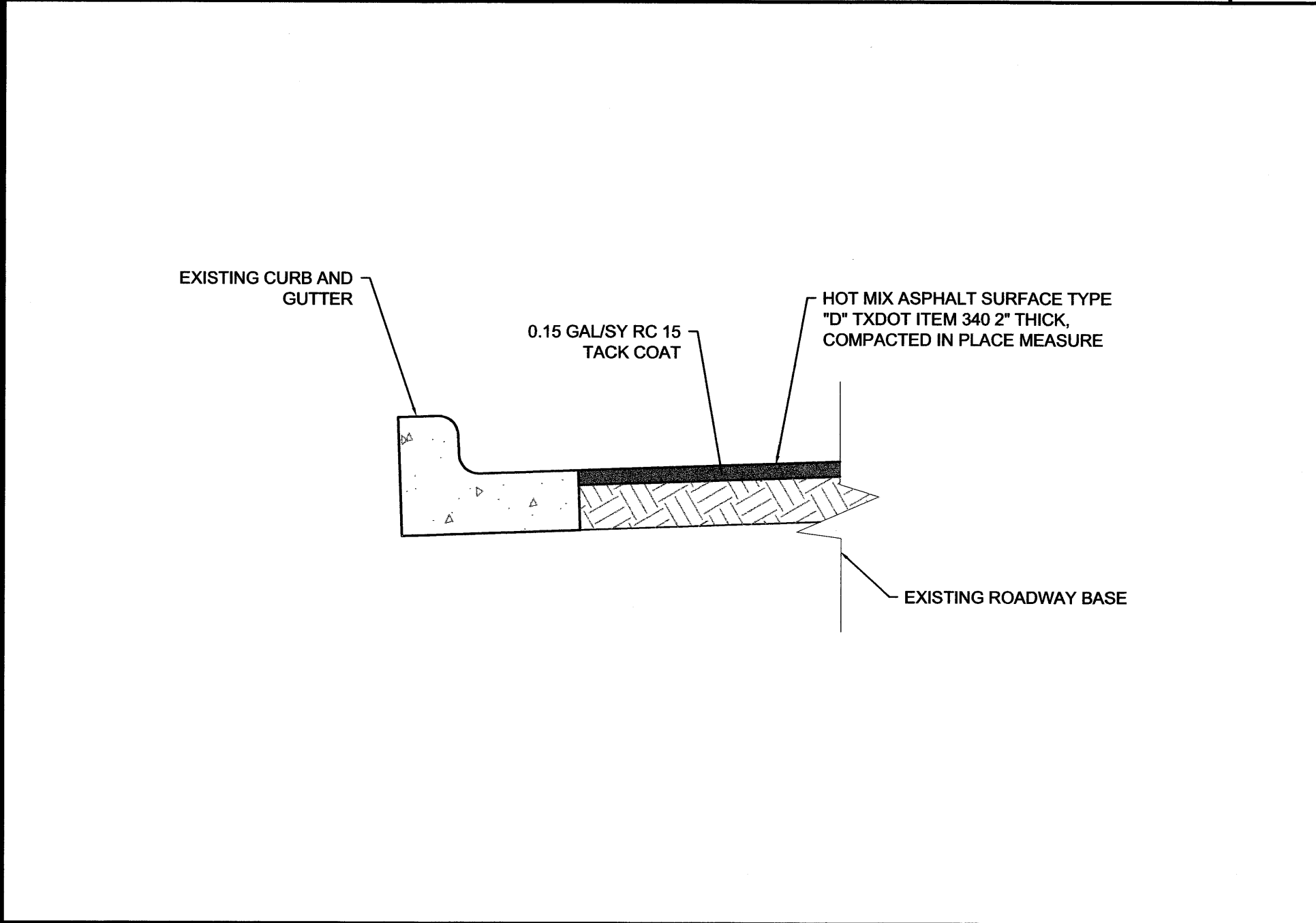


THREE SIDED INLET WITH HEADWALL N.T.S. 1

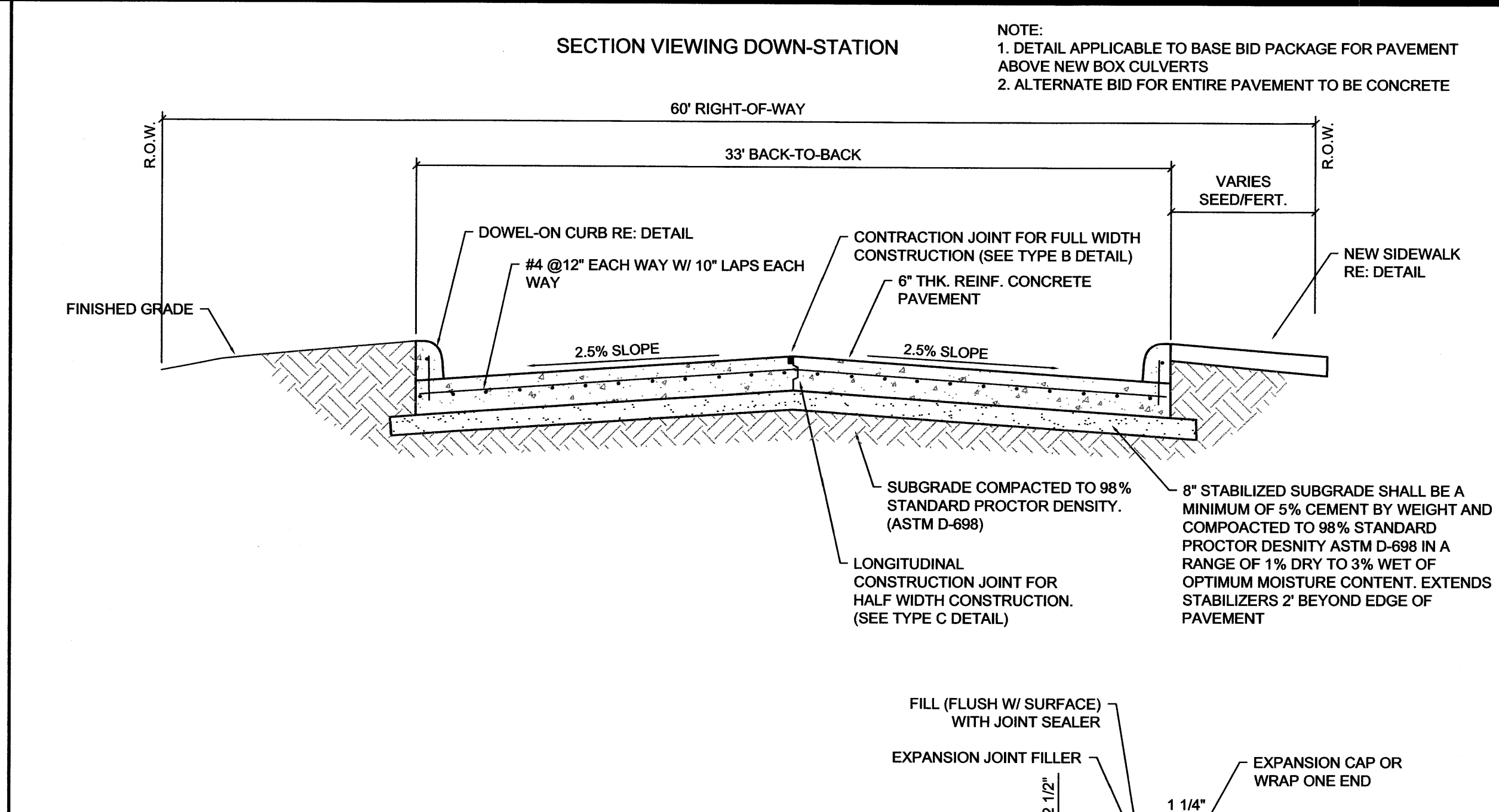
NO.	DATE	ISSUED FOR	10/05 City Review	
			1/06 Issued for Bid	
GOODWIN-LASITER, INC. ENGINEERS - ARCHITECTS SURVEYORS			1509 EMERALD PKWY., SUITE 101 • COLLEGE STATION, TEXAS 77845 • (979) 696-5767 • clev@goodwinlaster.com 1609 S. CHESTNUT ST., SUITE 202 • LUFKIN, TEXAS 75901 • (936) 637-4900 • admin@goodwinlaster.com ©2004 ALL RIGHTS RESERVED BY GOODWIN-LASITER, INC. UNAUTHORIZED USE OR REPRODUCTION IS PROHIBITED WITHOUT WRITTEN CONSENT FROM GOODWIN-LASITER, INC. DRAWN BY: VS APPROVED BY: JLR PLOT SCALE: 1" = 1'-0"	
JOHN RUSK 87884 LICENSED PROFESSIONAL ENGINEER			STATE OF TEXAS JANUARY 2006 1/24/2006	
Kent Street Extension City of Bryan Bryan, Texas Paving and Drainage Details			CONTRACT NO. 600020 SHEET NO. C1.6	



INLET JUNCTION BOX N.T.S. 11



ASPHALT OVERLAY PAVING SECTION N.T.S. 10



GENERAL NOTES:

I. CONCRETE

A. Six (6) inch thickness for all streets and appurtenances.

B. Refer to specifications for required cement content.

C. 4,000 pounds per square inch compressive strength minimum 28 days (No Fly Ash Allowed).

II. REINFORCING STEEL AND SUPPORTS REINFORCING BARS

ASTM A 615, GRADE 60

A. Steel reinforcement to be #4 bars @ 12" spacing (center to center)

SUPPORTS

Mats to be supported by chairs as manufactured by Dayton/Richmond R-22 (Plastic) or CHCU (Metal) or City approved equal.

III. EXPANSION, CONTRACTION, and LONGITUDINAL CONSTRUCTION JOINTS

A. Expansion Joints shall be 3/4 inch in width and full depth. Use capped or wrapped 5/8 inch diameter smooth dowels eighteen (18) inches long at twelve (12) inch centers. Grease capped or wrapped end of smooth dowels. Expansion joint spacing to be fifty (50) foot maximum. Unless otherwise shown Expansion Joint material to be asphalt or asphalt impregnated fiber joints in accordance with ASTM D994 or ASTM D1751, respectively. Redwood joints may be used in lieu of asphalt impregnated fiber joints. Preform rubber or cork in accordance with ASTM D1752.

B. Contraction Joints shall be formed by use of approved premolded strips or saw cut in pavement and sealed with joint sealer. Premolded strips shall be a minimum of 1 1/2 inch in depth. Saw cuts shall be 1/4 inch in width 1 1/2 inch in depth unless shown otherwise. Contraction Joint spacing to be ten (10) feet and at centerline of pavement.

C. Longitudinal Construction Joints shall be used at centerline of pavement for half width construction. Use 1/2 inch diameter by eighteen (18) inch long development bar spaced at twelve (12) inch centers through the center of metal keyway. All joints to be sealed with joint sealer.

D. Jointing may also be required at locations shown on the drawing as "Expansion Joint" (E.J.), "Contraction Joint" (C.J.) or "Longitudinal Construction Joint" (L.C.J.).

IV. SUBGRADE

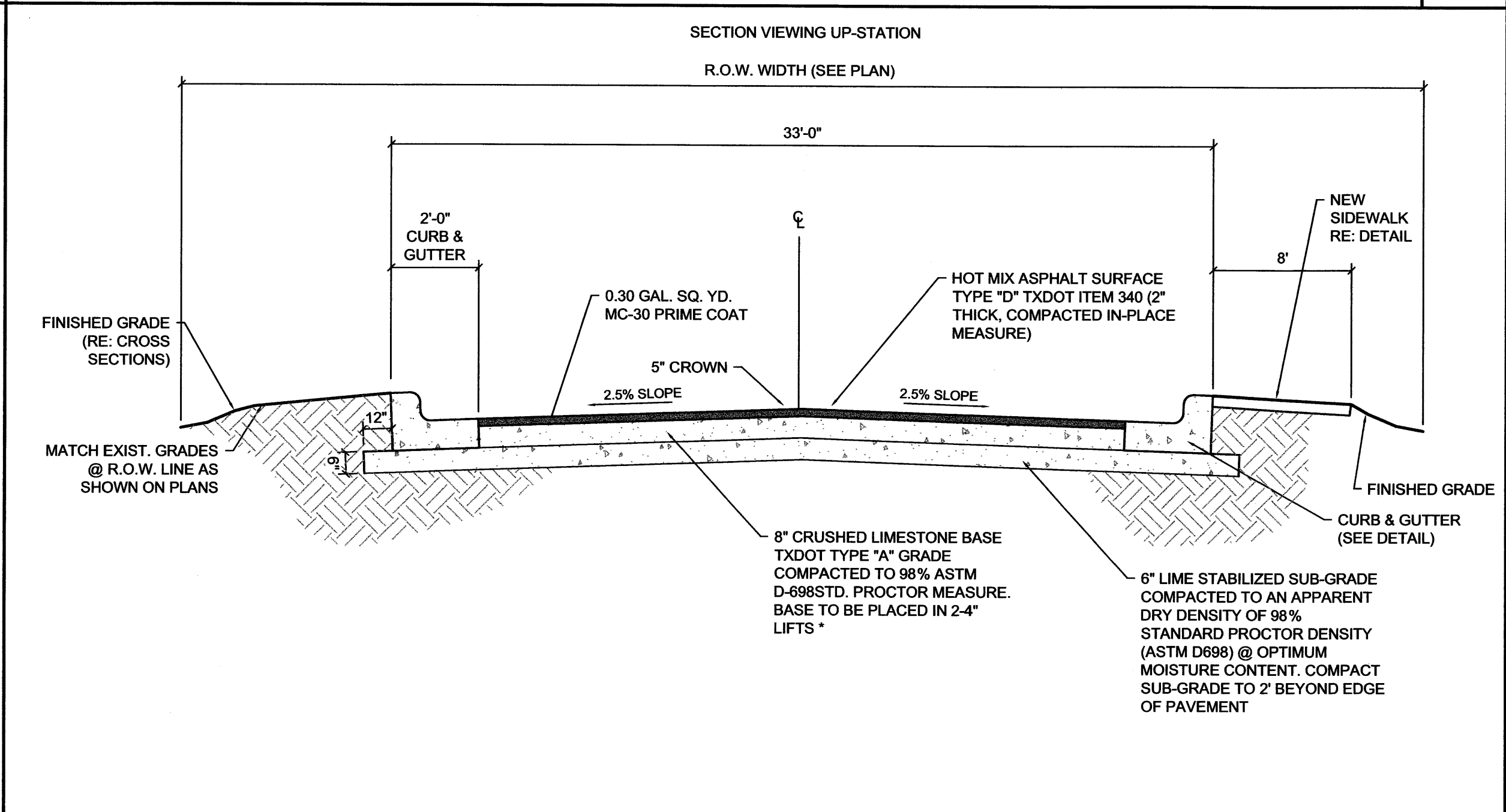
A. Obtain the City approval of subgrade, forms, and screeds prior to concrete placement.

B. Subgrade to be cement stabilized and compacted to 98 % standard proctor density as prescribed by ASTM D698.

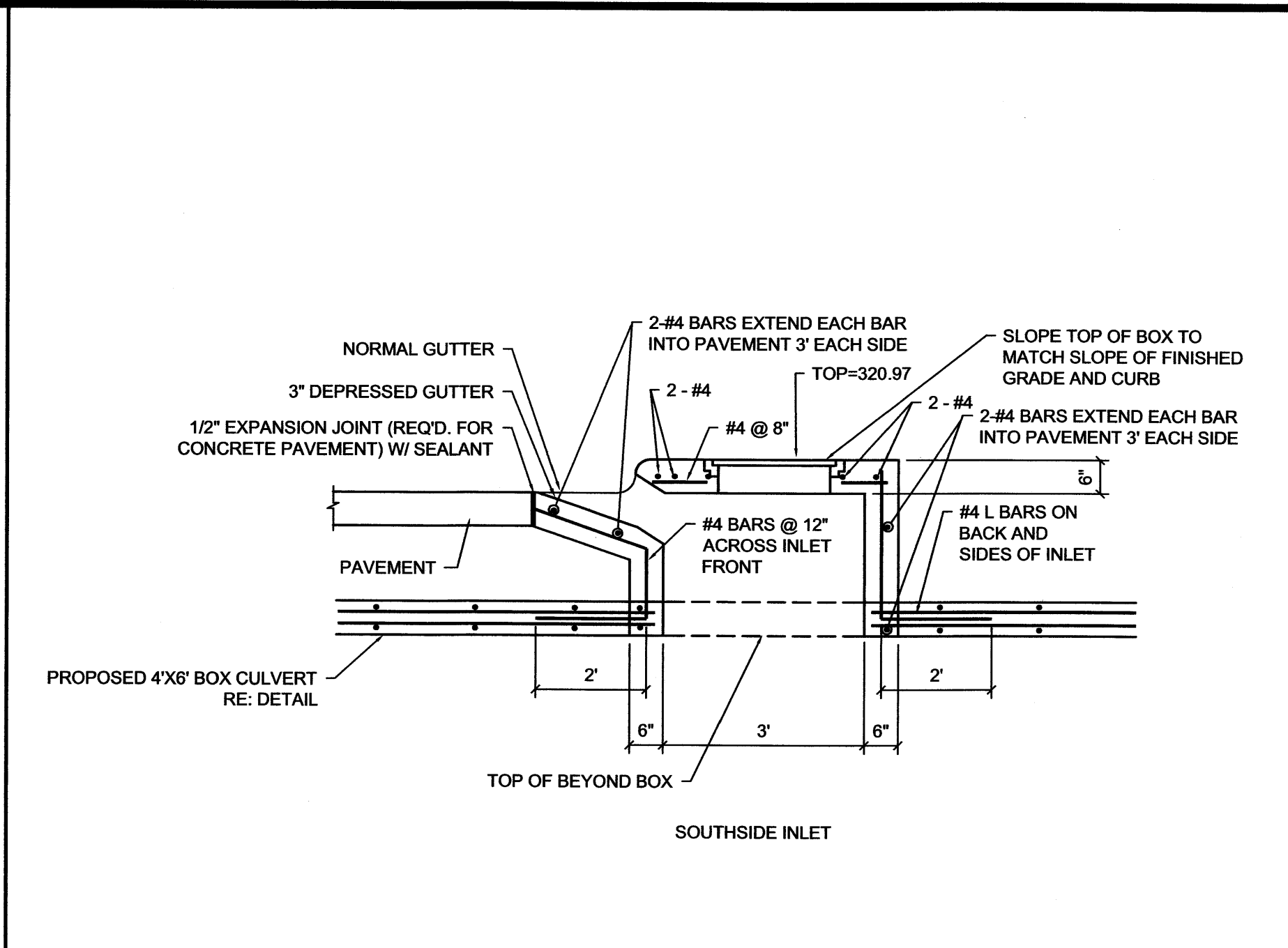
C. Dampen subgrades not covered with membrane by sprinkling immediately before placing concrete. (Omit when subgrade is already damp).

D. Dry out soggy subgrade before placing concrete unless wetting is uniform and placing can be done without damage to subgrade.

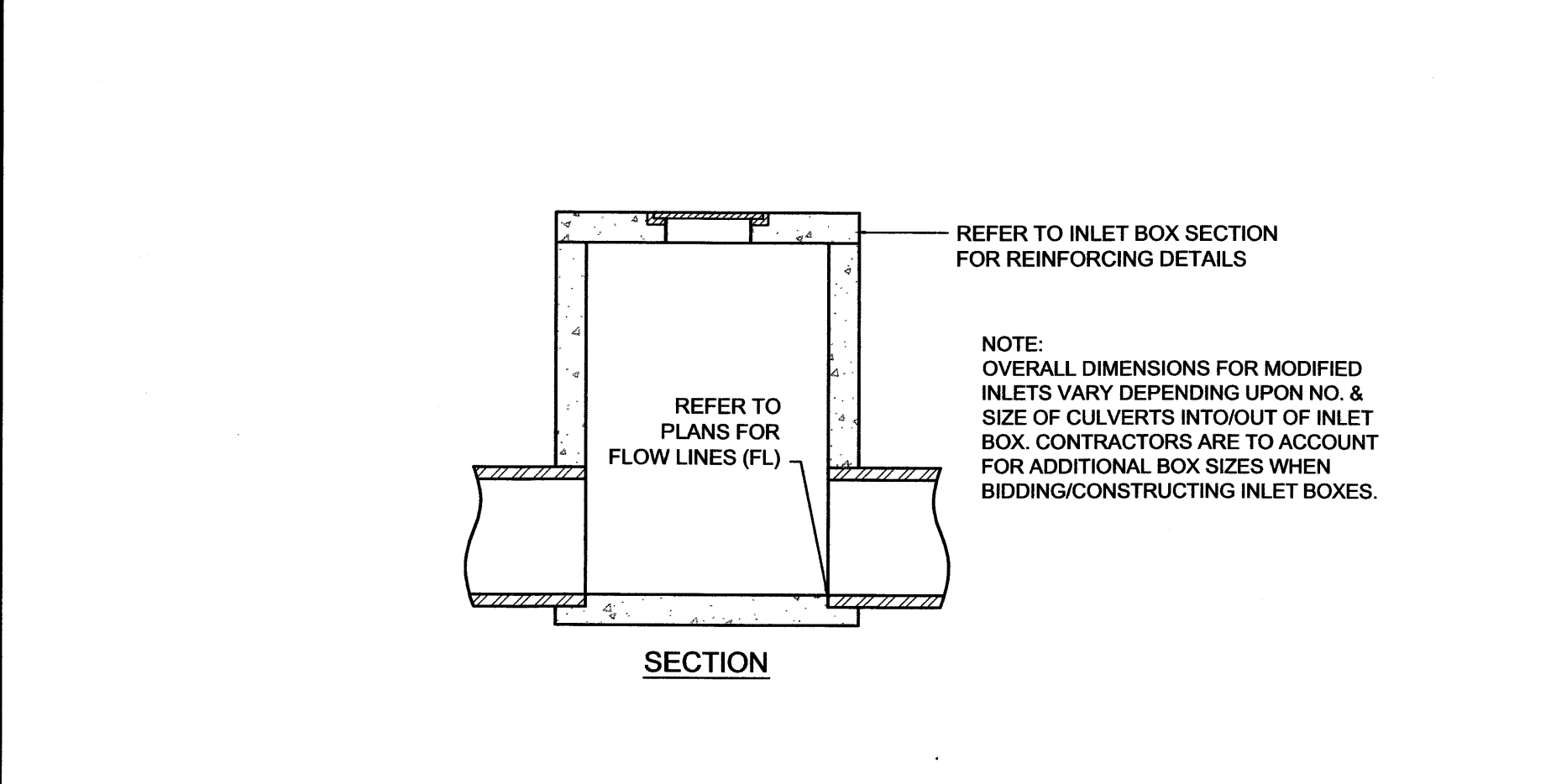
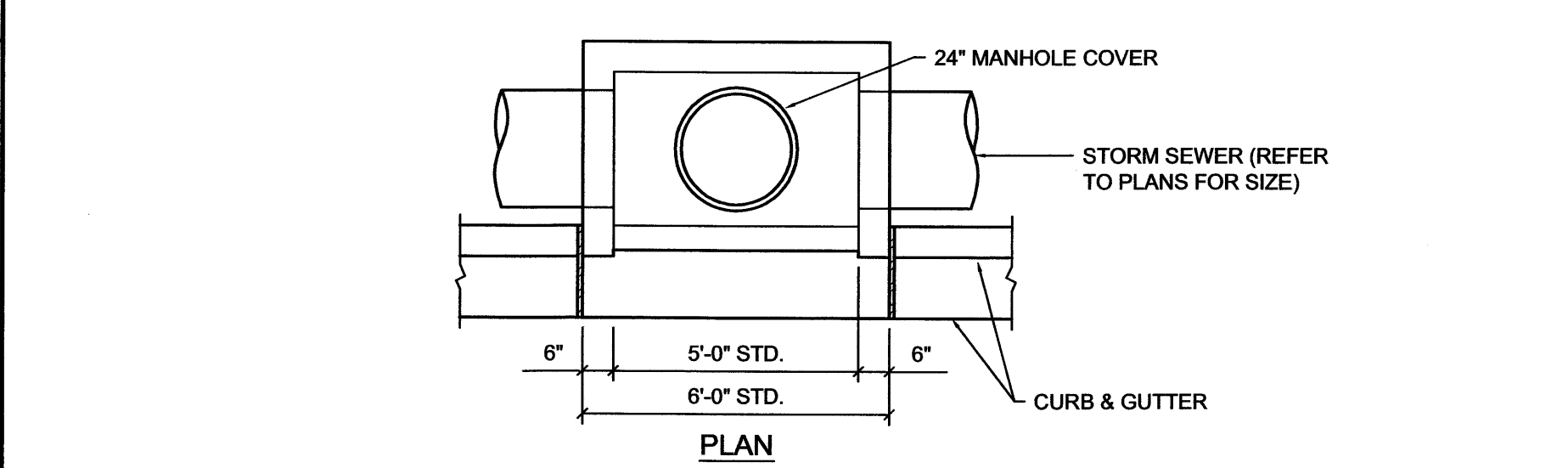
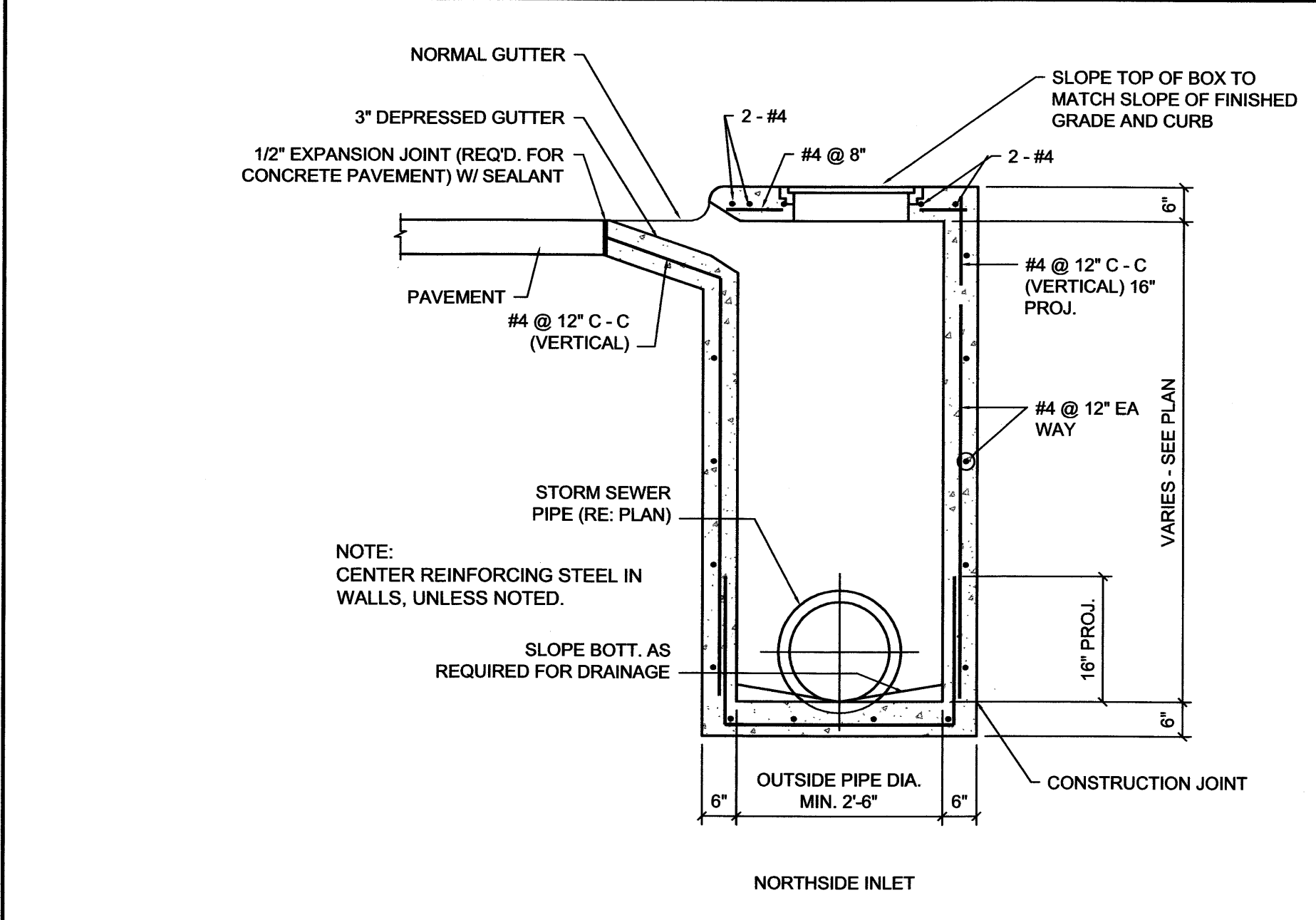
CONCRETE PAVING SECTION N.T.S. 5



ASPHALT PAVING SECTION N.T.S. 4



5' CURB INLET CONNECTED TO BOX CULVERT N.T.S. 3

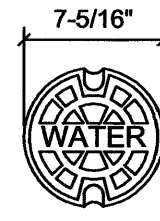


TYPE 'A' CURB INLET N.T.S. 1

GOODWIN-LASITER, INC.		
ENGINEERS - ARCHITECTS		
SURVEYORS		
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NO.	DATE	ISSUED FOR
1	10/05	City Review
DRAWN BY: VS		
CHECKED BY: JLR		
APPROVED BY: JLR		
SCALE: 1:1		
PROJECT: KENT STREET EXTENSION		
SHEET NO. 1		
CONTRACT NO. 600020		
SHEET NO. C1.7		

Tyler Pipe
Subsidiary of
Tyler Corporation

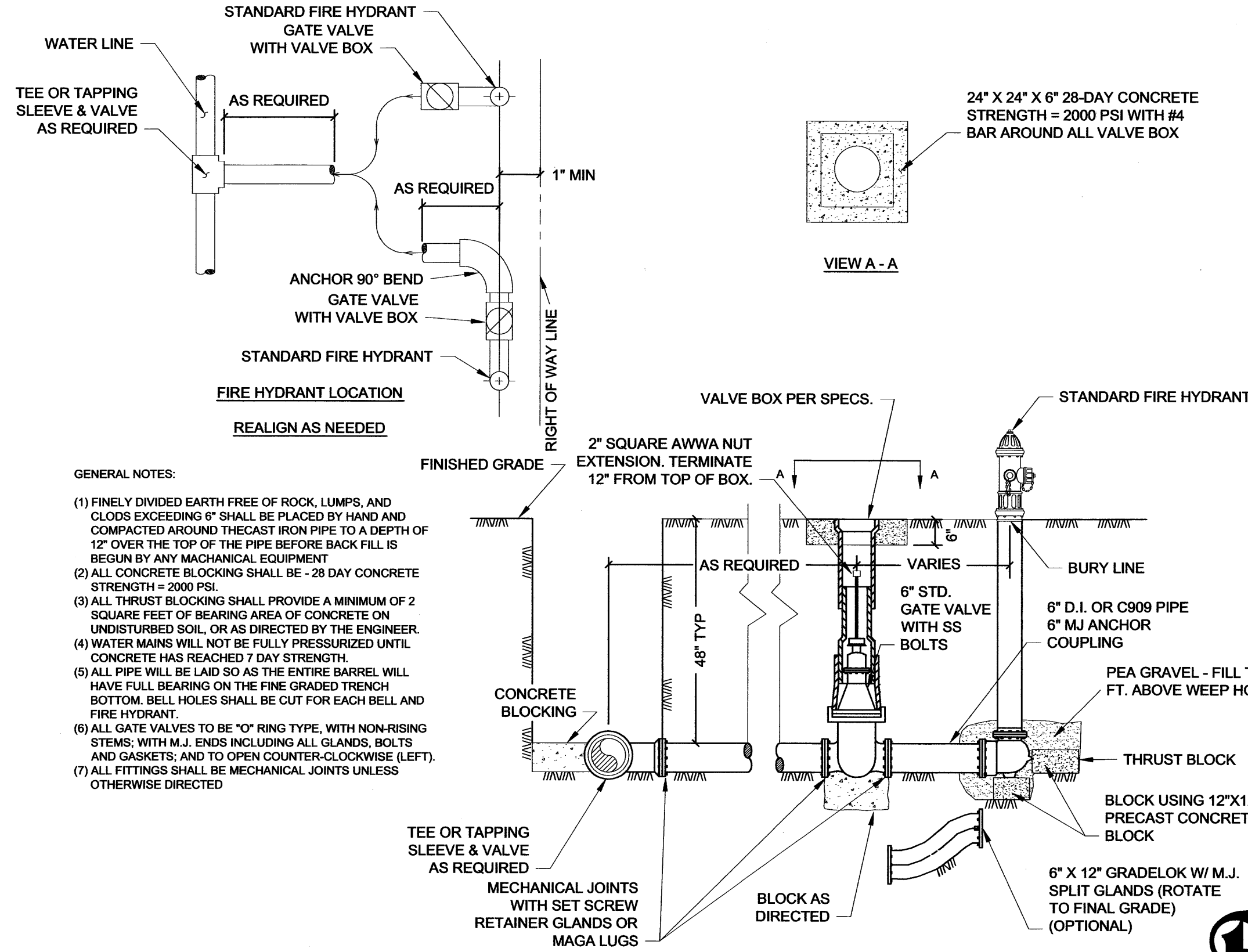
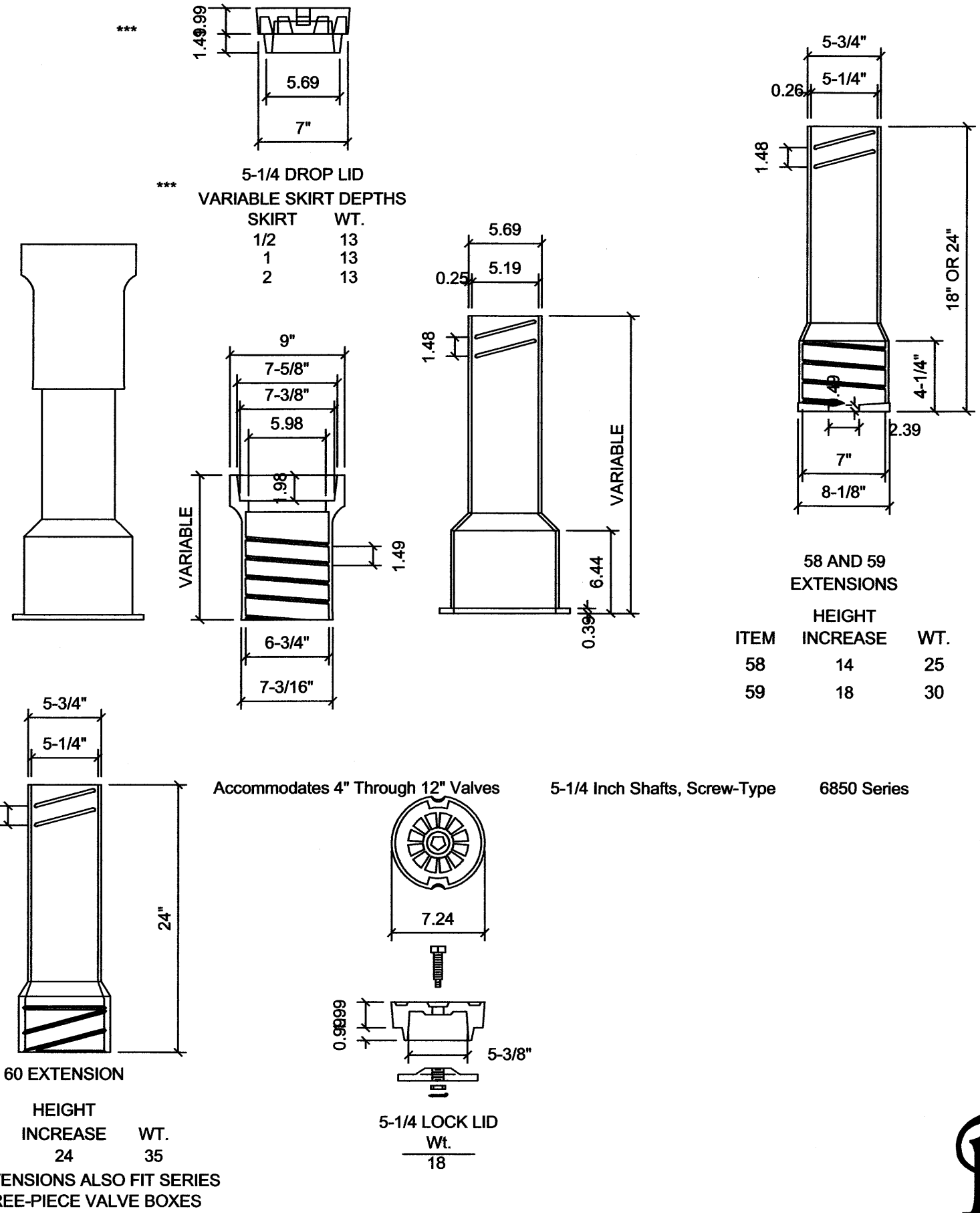
LIDS ARE MARKED "WATER"
OR "GAS" UNLESS SPECIFIED
OTHERWISE, "WATER" WILL BE
SHIPPED



BOX COMPLETE EXTENSION, IN INCHES		WT.	TOP SECTION, W/LID LENGTH	WT.	BOTTOM LENGTH	WT.	*PIECES PER PKG.
461-S	19-22	60	10	35	15	25	...
462-S	27-32	70	10	35	24	35	...
562-S	27-37	80	16	45	24	35	20
563-S	33-43	85	16	45	30	40	20
564-S	39-50	90	16	45	36	45	20
662-S	36-52	105	26	65	30	40	20
664-S	39-60	110	26	65	36	45	20
666-S	51-71	135	26	65	** 48	70	20
668-S	62-82	145	26	65	** 60	80	20

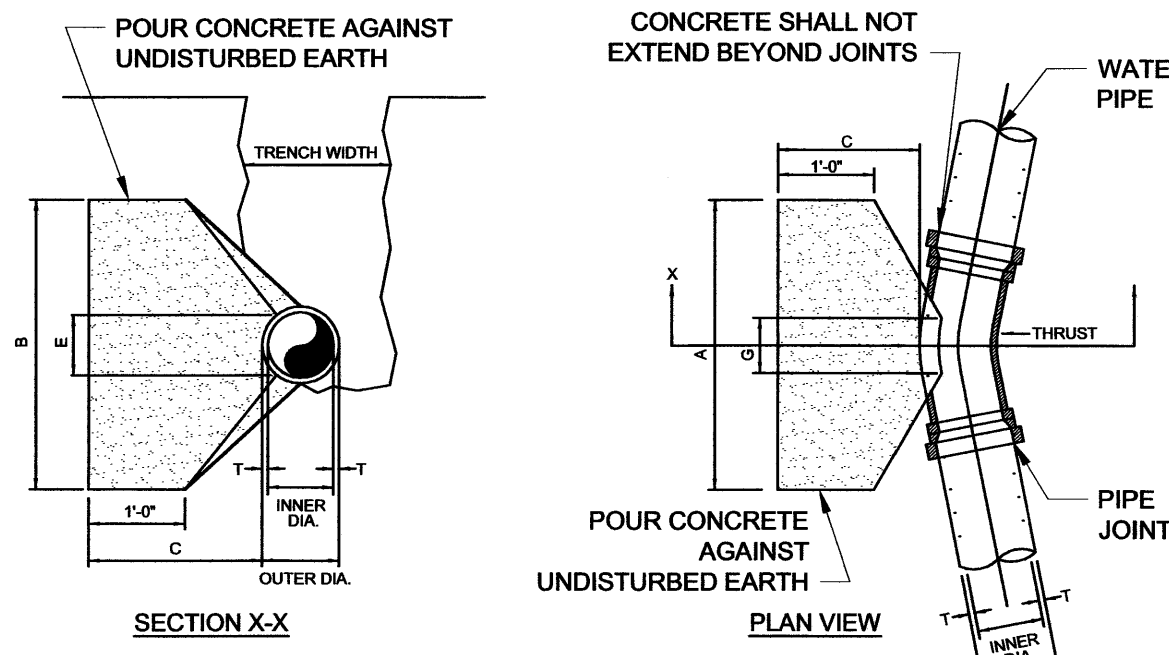
* TYLER MAY SHIP LOOSE PIECES IF
PACKAGING DELAYS YOUR ORDER

** MAY BE FURNISHED IN TWO PIECES
SCREWED TOGETHER TO MAKE THE
LENGTH REQUIRED

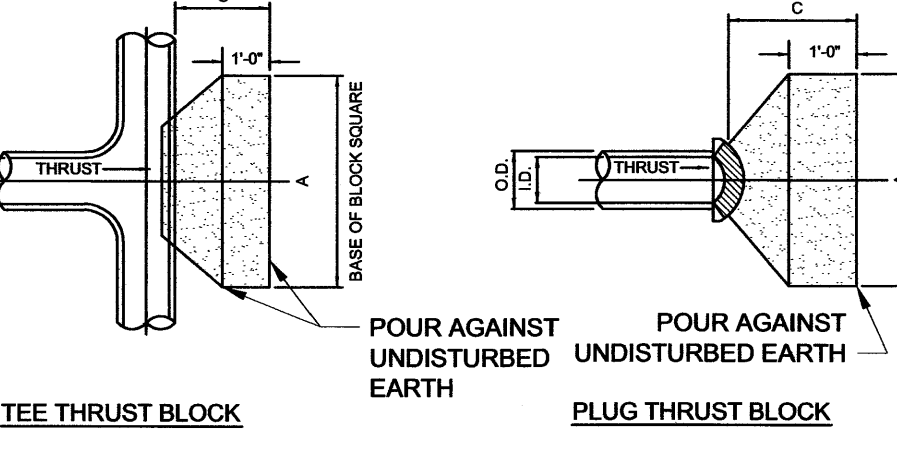


STANDARD FIRE HYDRANT ASSEMBLY

- THRUST BLOCK NOTES:
- ALL CALCULATIONS ARE BASED ON INTERNAL PRESSURE OF 200 PSI FOR 24" AND SMALLER INNER DIAMETER PIPE.
 - ALL BEARING SURFACES OF THRUST BLOCKS SHALL BE PLACED AGAINST UNDISTURBED EARTH OR ROCK.
 - CONCRETE FOR BLOCKING SHALL BE 2000 PSI.
 - DIMENSIONS MAY BE VARIED AS REQUIRED BY FIELD WHERE AND AS DIRECTED BY THE ENGINEER THE VOLUME OF CONCRETE BLOCKING SHALL NOT BE LESS THAN SHOWN HERE.
 - WATER MAIN WILL NOT BE FILLED UNTIL ALL CONCRETE BLOCKING HAS REACHED 1500 PSI.

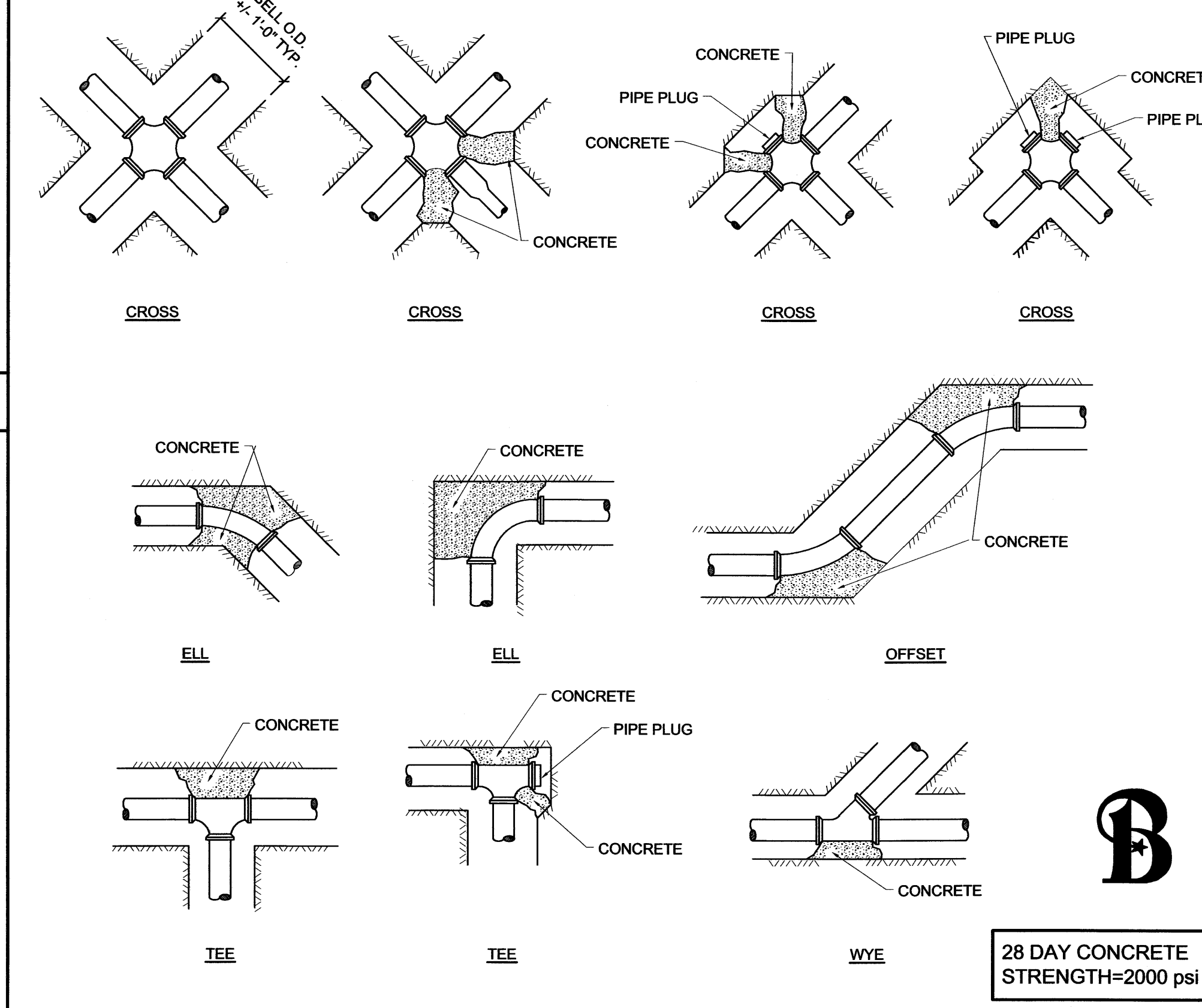


TEE AND PLUG SCHEDULE					
I.D. (in.)	THRUST (tons)	C (ft)	A (ft)	VOLUME (c.y.)	
4, 6, 8	5.1	1.5	2.5	0.3	
10, 12	11.3	1.5	3.5	0.6	



BEND	SIZE	A (ft)	B (ft)	C (ft)	E (ft)	G (ft)	VOLUME (c.y.)
90°	6, 8"	5.0	1.5	1.5	.09	2.7	0.4
	10, 12"	6.5	2.5	1.5	1.2	4.0	1.0
45°	6, 8"	2.0	2.0	1.5	.09	1.5	0.2
	10, 12"	3.5	2.5	1.5	1.2	2.2	0.5
22.5°	6, 8"	1.5	1.5	1.5	.09	0.8	0.1
	10, 12"	2.0	2.5	1.5	1.2	1.1	0.3
11.25°	6, 8"	1.0	1.5	1.5	.09	0.4	0.1
	10, 12"	1.5	1.5	1.5	1.2	0.6	0.1

BEDDING/TRENCH FOR PVC PIPE



CAST IRON VALVE BOXES, TWO PIECE

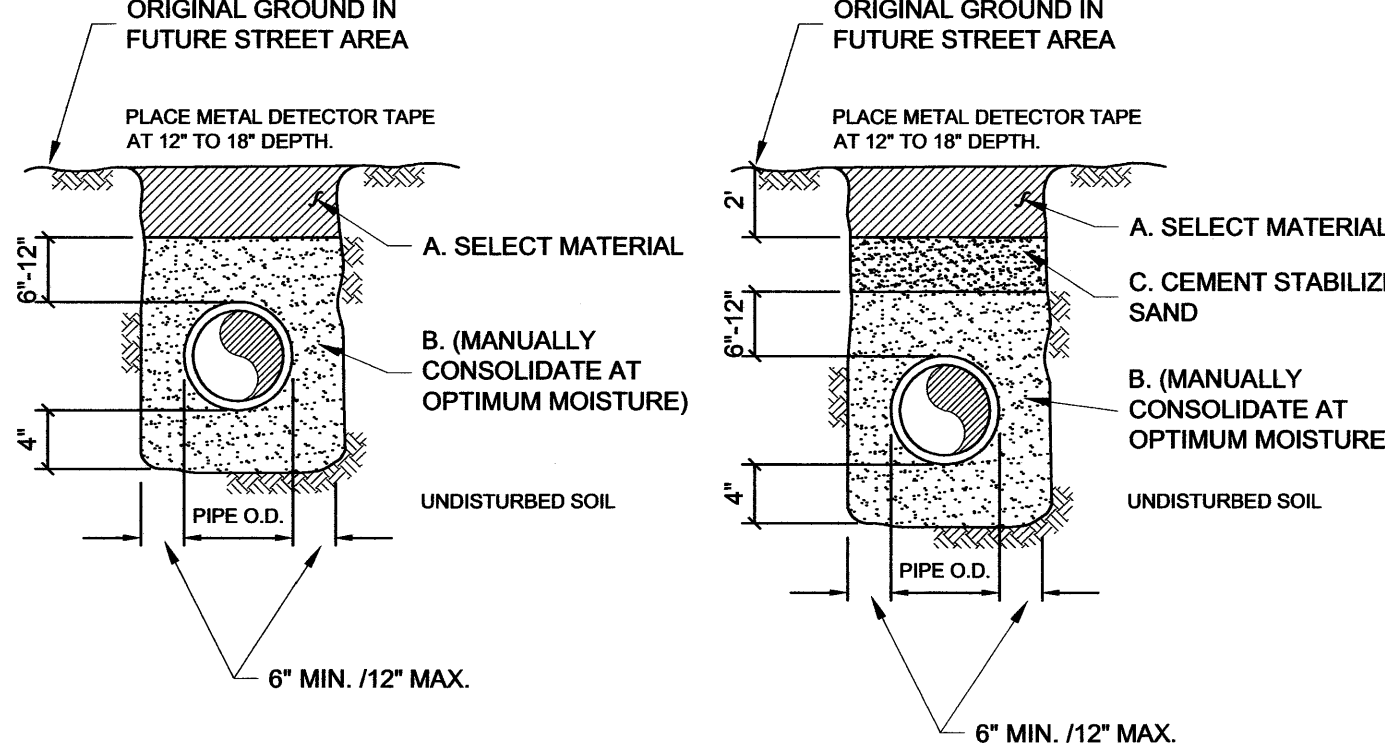
N.T.S. 11

THRUST BLOCK DETAILS

N.T.S. 5

BLOCKING FOR DUCTILE IRON FITTING

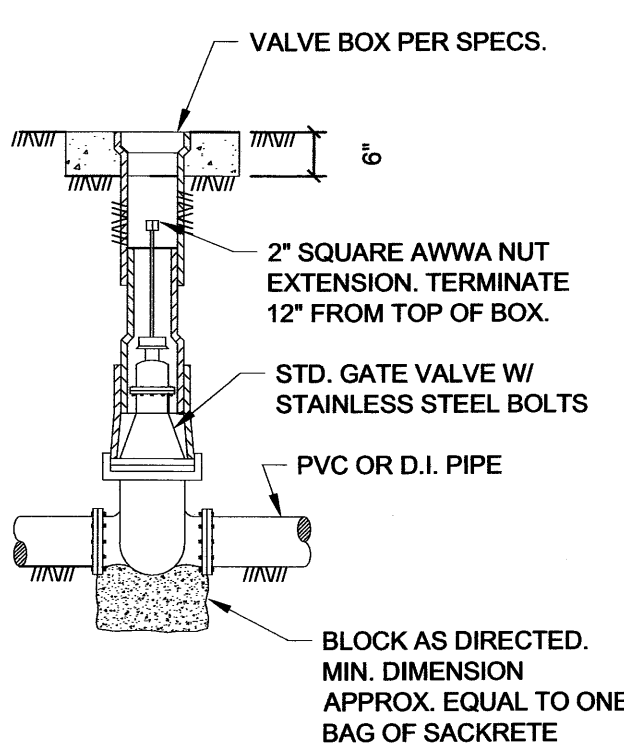
N.T.S. 2



- A. SELECT MATERIAL
MATERIAL EXCAVATED FROM THE DITCH, (WHICH IS FREE OF ROCKS, LUMPS, CLODS, OR DEBRIS LARGER THAN TWO (2) INCHES IN THE LARGEST DIMENSION), COMPACTED TO A MINIMUM OF 90% OF MAXIMUM DENSITY AS DETERMINED BY ASTM D698 (STANDARD) AT A MOISTURE CONTENT WITHIN OPTIMUM TO +4% OF OPTIMUM UNDER FUTURE STREET AREAS.
- B. GRANULAR MATERIAL
MATERIAL SHALL BE BANK RUN RIVER SAND WHICH IS FREE OF DETRIMENTAL QUANTITIES OF CLAY, DEBRIS, OR ORGANIC MATERIAL AND WHICH, WHEN TESTED BY STANDARD LABORATORY METHODS, MEET THE FOLLOWING REQUIREMENTS:
MAXIMUM LIQUID LIMIT 45
MAXIMUM PLASTICITY INDEX 15
MAXIMUM PERCENT PASSING NO. 200 SIEVE 35
MINIMUM PERCENT PASSING 3/4" SIEVE 100
THE MATERIAL SHALL BE FREE FLOWING AND WHEN WET, SHALL NOT ADHERE TO FORM A BALL WHEN PRESSED IN THE HAND.
- C. CEMENT STABILIZED SAND

- NOTES
- FOR BEDDING AND USE TRENCHING WITHIN EXISTING STREET/STRUCTURAL AREAS SEE DETAILS FOR OPEN CUT STREETS.
 - ALL BEDDING & INSTALLATION OF PVC PIPE SHALL BE IN ACCORDANCE TO ANSI/AWWA STANDARDS FOR PVC PIPE.
 - ALL BEDDING & INSTALLATION OF DUCTILE IRON PIPE SHALL BE IN ACCORDANCE TO ANSI/AWWA C 150/A21.50.
 - COMPACTION SHALL BE ATTAINED BY MECHANICAL TAMPING.
 - RELATIVE COMPACTION SHALL BE TESTED IN THE PRESENCE OF THE CITY ENGINEER.
 - DUST RESULTING FROM THE CONTRACTOR'S PERFORMANCE OF THE WORK, EITHER INSIDE OR OUTSIDE THE RIGHT OF WAY, SHALL BE CONTROLLED BY THE CONTRACTOR.
 - ALL TRENCHES SHALL BE BACK FILLED AND TEMPORARY PAVING OR PLATING PLACED AT THE END OF EACH WORKING DAY.
 - SEE "OPEN CUT DETAILS" ST4-00, ST4-02 & ST4-02.

- GENERAL NOTES
- ALL AREAS WHERE EXISTING VEGETATION AND GRASS COVER HAVE BEEN BARED BY CONSTRUCTION SHALL BE ADEQUATELY BLOCK SODDED OR HYDROMULCHED AND WATERED UNTIL GROWTH IS ESTABLISHED. IN DEVELOPED AREAS WHERE GRASS IS PRESENT, BLOCK SOD WILL BE REQUIRED. BARED AREAS SHALL BE SEEDED OR SODDED WITHIN 14 CALENDAR DAYS OF LAST DISTURBANCE.
 - APPROVED EROSION CONTROL MEASURES MUST BE INSTALLED DURING THE ENTIRE TIME THAT EARTH HAS BEEN BARED BY CONSTRUCTION AND SHALL STAY IN PLACE UNTIL ACCEPTABLE VEGETATIVE GROWTH IS ESTABLISHED AFTER CONSTRUCTION IS COMPLETE AND THEN REMOVED BY CONTRACTOR.
 - ALL EROSION CONTROL MEASURES SHOULD BE CLEANED OF SILT AFTER EVERY RAIN.
 - ESTABLISHMENT OF VEGETATION MAY BE A WARRANT ITEM.



PIPE BEDDING DETAILS

N.T.S. 4

GATE VALVE AND BOX

N.T.S. 1

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STATE OF TEXAS
JOHN RUSK
87884
LICENSED PROFESSIONAL ENGINEER
1/12/06

RAYSON B. HARRIS
93848
LICENSED PROFESSIONAL SURVEYOR
1/24/2006

JOYSON E. BARKER
1/24/2006

Kent Street Extension
City of Bryan
Bryan, Texas
Waterline Details

CONTRACT NO.
600020
SHEET NO.
C1.8

NO. DATE ISSUED FOR
1 10/05 City Review

2006/01/12 © 09-49
D:\BDD\600020\600020 - KENT STREET.DWG